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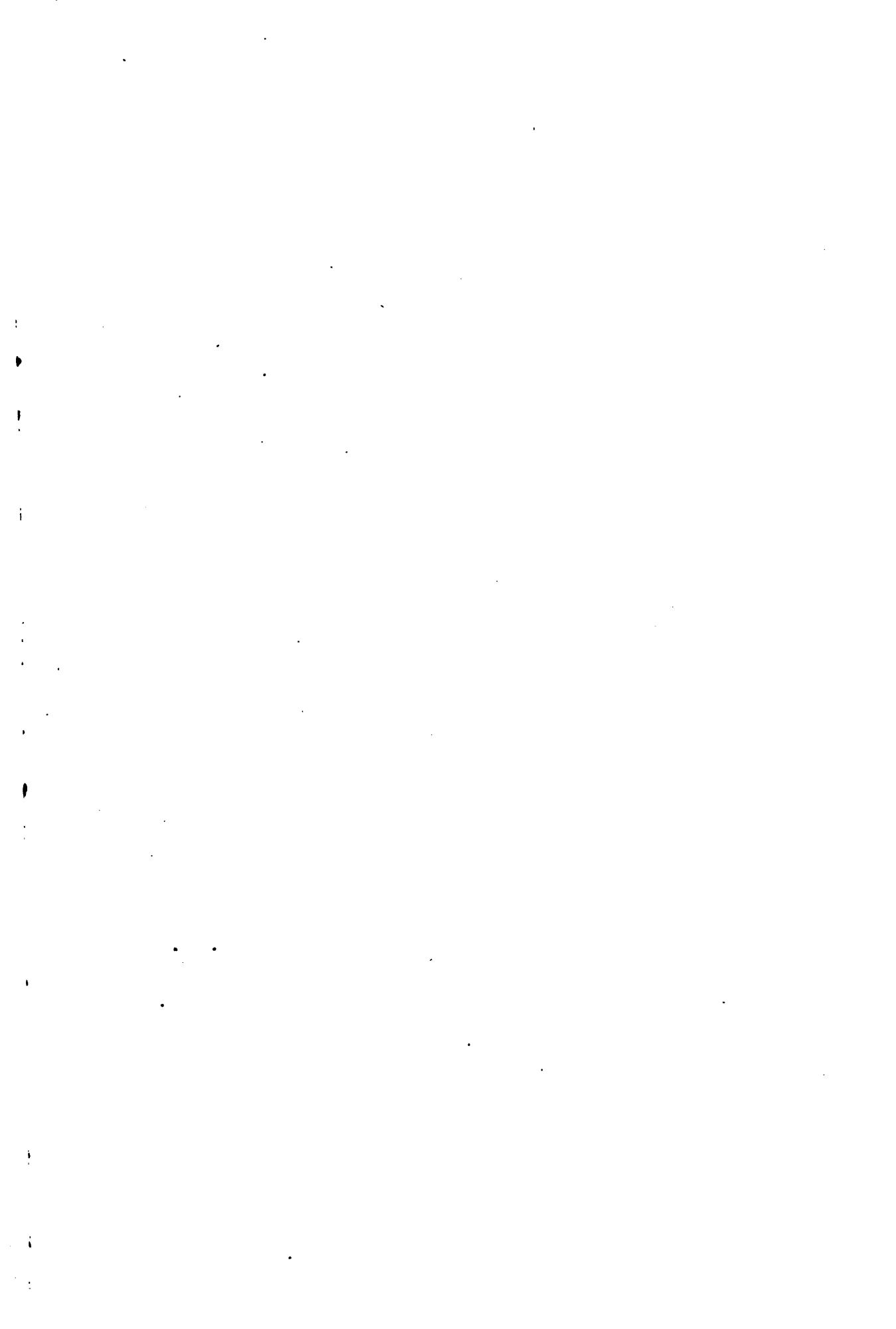


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FURTHER DISCOVERIES
OF
CRETAN AND AEGEAN SCRIPT

FURTHER DISCOVERIES
OF
CRETAN AND AEGEAN SCRIPT
WITH LIBYAN AND PROTO-EGYPTIAN COMPARISONS

BY
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WITH TWO AUTOTYPE PLATES, FOUR COMPARATIVE TABLES AND THIRTY-FIVE
ILLUSTRATIONS IN THE TEXT

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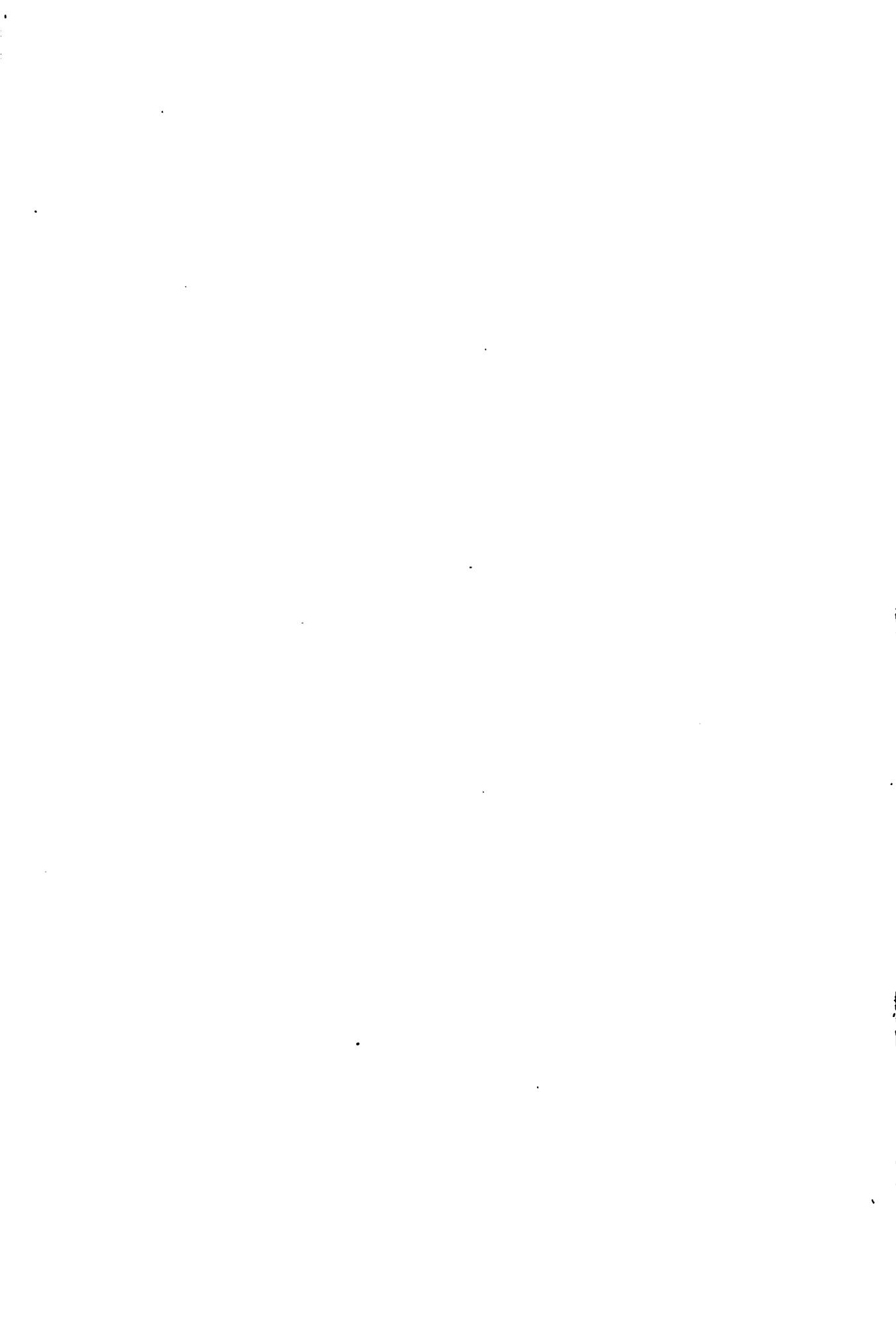


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FURTHER DISCOVERIES
OF
CRETAN AND AEGEAN SCRIPT



FURTHER DISCOVERIES OF CRETAN AND AEGEAN SCRIPT: WITH LIBYAN AND PROTO-EGYPTIAN COMPARISONS.

[PLATES I. (IX.), II. (X.).]

PART I.—FURTHER DISCOVERIES OF CRETAN AND AEGEAN SCRIPT.

§ 1. *Introductory.*

IN a former communication¹ attention was called to an indigenous system of writing in Crete, the earlier stages of which go back, not only far beyond the date of the first introduction of the Phoenician alphabet among the Greeks, but to a period considerably anterior to the most ancient monumental record of the Semitic letters.

From the evidence of ancient Cretan seals it was possible to demonstrate the existence of a form of pictographic writing from its simplest beginnings to a more conventional and abbreviated stage. Side by side with this a variety of data supplied by seals, vases, and inscribed stones, showed the further existence of a linear system of writing, connected with the other and presenting some striking comparisons on the one hand with certain characters found by Professor Petrie in Egypt and by Mr. Bliss at Lachish; on the other hand with the syllabic script of Cyprus and some Anatolian regions. It was further pointed out that in some instances Cretan linear characters displayed a remarkable correspondence with Phoenician and early Greek letter forms.

It was, moreover, possible to show from the evidence of finds like that of Hagios Onuphrios and from the imitation of certain characteristic ornamental motives, that the more purely pictorial class of the Cretan seals went back at least as far as the period of the Twelfth Dynasty in Egypt, and to the first half of the third Millennium before our era. I have since been able to accumulate further proofs of a very early contact between Crete and Egypt, going back to a considerably earlier period than that of the Twelfth Dynasty.

Although, however, various decorative motives in this primitive class of Cretan seals were due to Egyptian influence, it nevertheless appeared that

¹ *Primitive Pictographs and a Prae-Phoenician Script from Crete, &c.* *J.H.S.* vol. xiv. 1894 p. 270 seqq.; and, London, Quaritch, 1895. The first part of the present paper was communi-

cated to the Hellenic Society in November 1896. The second part containing the proto-Egyptian and Libyan parallels has been added since that date.

the representations as a whole were of indigenous character,—the later conventionalised pictographs showing perhaps a greater affinity to the 'Hittite' characters of Anatolia and Northern Syria than to the Egyptian.

Two further visits to Crete in the springs of 1895 and 1896¹ have enabled me to add to the material previously collected, and my most recent investigations in the island have resulted in the discovery of one monument of capital importance. I was also able to ascertain the existence of a geological phenomenon which goes far to explain how it was that this island became at such a very early date a centre of the glyptic art, and was thus able to produce the engraved designs on seals which eventually gave rise, by a gradual evolution, to a conventional system of writing. This was the existence, throughout a considerable tract of south-eastern Crete, of rich beds of steatite or soapstone, a soft and, in some of its phases, attractive material, of which all the earlier engraved stones and seals found in the island are composed. Following up a clue given me by Dr. Hazzidakis, the President of the Syllogos of Candia, I found plentiful beds of steatite of a translucent greenish hue, in the valley of the Sarakina stream, about half-an-hour below the site of the ancient Malla; and I subsequently obtained information of the existence of equally prolific deposits on the coast at the Kakon Oros, a little east of Arvi, and in the range that separates Kastelliana from Sudzuro, in the territory, that is, of the ancient Priansos.

In dealing with the new materials bearing on the Cretan script it will be convenient to begin with the earliest class of seal-stones, presenting designs and characters of a linear kind; to pass thence to the seals on which, though still early in execution, designs are seen of a more definitely pictographic style, and from these to their direct offshoot, the Eteocretan seal-stones with a more conventionalized pictographic writing. New examples of the fully developed linear system of writing on seals and other objects will next be passed in review, including the most important object of this class as yet brought to light, namely, a steatite Libation Table presenting part of an inscription.

Attention will finally be called to a prism-seal from Karnak, revealing a connexion between Crete and the Nile Valley at an extremely early period, and to the far-reaching results of this early intercourse on the prehistoric arts of the Aegean world.

§ 2. *Primitive Prism-Seal with Linear Characters and Figures.*

The remarkable seal-stone seen in Fig. 1 was first observed and described by the Italian archaeologist, Dr. A. Taramelli, who found it in the possession of an inhabitant of the village of Kalokhorio in the Pedeada province. It has now been acquired for the Museum of the Syllogos at Candia.

From its superior size, its somewhat irregular shape, and the rude character of the designs, it claims a very early place in the series of Cretan

¹ A short account of my journey in 1896 appeared in the *Academy*, June 13, 20, July 4, and 18 of that year.

bead-seals, and from its exceptional character I have preferred to place it in a separate class. It is of yellowish-brown steatite, and, like the other seals,

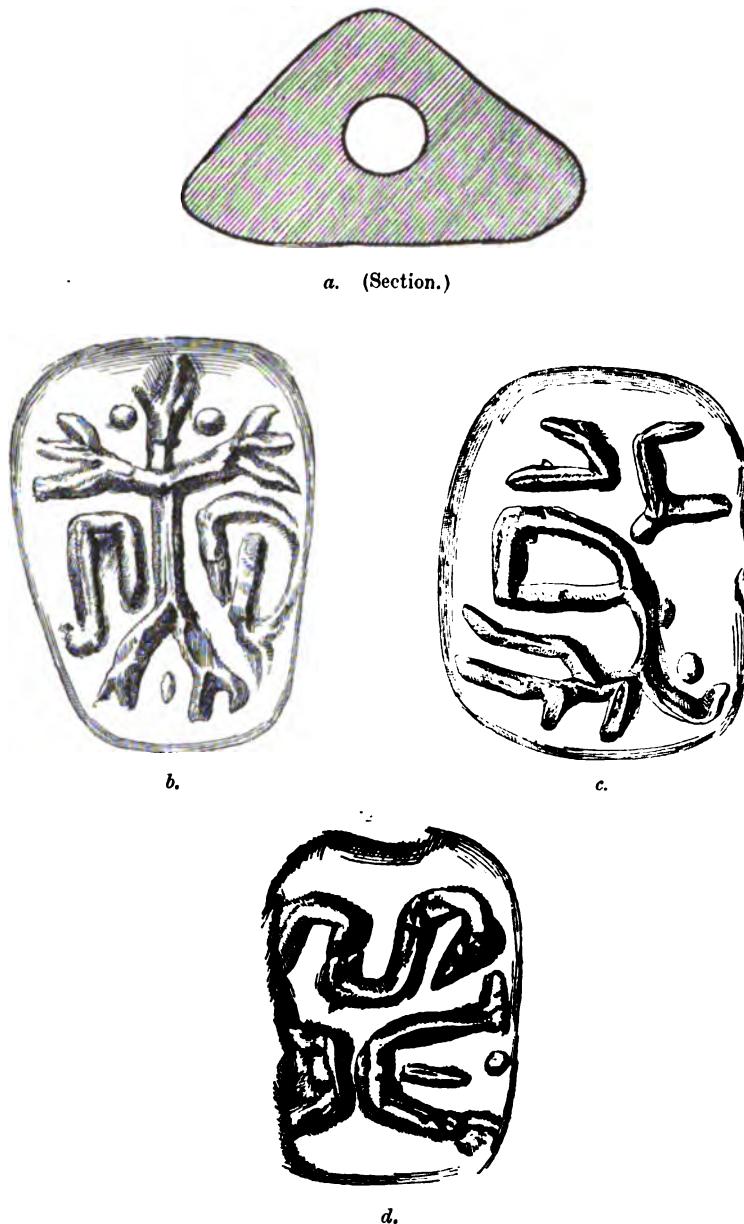


FIG. 1.—RUDE THREE-SIDED SEAL OF STEATITE FROM KALOKHORIO. [§].
(*a*, section; *b*, *c*, *d*, sides.)

perforated through its axis. Its irregular three-sided section places it in the same category as a perforated triangular steatite with rude linear engraving

from central Crete, already described in my preceding paper ('Pictographs,' &c., Fig. 17). These examples point to the conclusion that the trilateral bead-seals originate from more or less natural triangular splinters of steatite which, with the surface somewhat smoothed and engraved in the simplest linear fashion, were adapted for wearing by being bored through their axis.

The character of the designs in the present instance bears a great resemblance to those of certain engraved objects from the Hagios Onuphrios deposit at Phaestos,¹ the early elements of which as is shown by the Egyptian evidence go back at least to the first half of the Third Millennium, B.C. The rude male figure with outstretched hands on the first side of the Kalokhorio seal recalls a figure on a terra cotta cylinder from that deposit.² On the other hand, the animal—for so it must be interpreted—in the lower part of the field on the second facet presents a distinct parallelism with that on the Phaestos whorl.³ Some of the signs or characters also show a certain resemblance to those on the whorl.

The conclusion to which both the Phaestos whorl and the Kalokhorio seal point is that the linear characters of the Cretan and Aegean scripts go back to a very early period and may be rather derived from the primitive school of engraving in which the objects are indicated by mere lines,—like the first drawings of a child on a slate—than from the more developed pictographic style. The conventionalised script derived from this more advanced style must therefore in the main be regarded as parallel with the linear characters rather than as their immediate source.⁴

It must still be observed that in some cases both systems—the linear and the more pictographic—show a close approximation and certain common elements. Purely pictographic and linear characters are, as has been already pointed out,⁵ occasionally found upon the same stone. On an early steatite seal of the four-sided class ('Pictographs,' &c., Fig. 36), we see a rude figure of a man on one side and on the other three well-pronounced linear characters. This seal, both from its style and material, belongs to an earlier date than what I have called the conventionalised pictographic class, and illustrates the fact that linear signs had already been evolved from linear drawings in this primitive period.⁶ The same conclusion may be deduced from other examples (Cf. 'Pictographs,' &c., Figs. 29, 30).

¹ See *Cretan Pictographs and Pre-Phoenician Script with an account of a Sepulchral deposit of Hagios Onuphrios near Phaestos*. London: B. Quaritch; New York: G. P. Putnams, 1895, p. 105 *seqq.*

² *Op. cit.* p. 107, Fig. 81b.

³ *Op. cit.* p. 15, (284) Fig. 11a.

⁴ On the relation of the Cretan Pictographs to the linear characters, more will be found below, p. 358 *seqq.*

⁵ 'Pictographs' &c. p. 32 [*J.H.S.* xiv. p. 301].

⁶ I have called attention to this point in my 'Pictographs' &c. p. 95 [*J.H.S.* xiv. p. 364]:

'In instituting the comparisons (on Table II),

the pictographic signs have been taken from the somewhat advanced types represented on the Mycenaean seal-stones of Eastern Crete, but inasmuch as the linear forms...go back to a very early date it would not be literally true to say that they are derived from pictographs in the stage represented by these Eteocretan seals. The actual prototypes of the linear forms would probably have been pictographs of a ruder 'graffito' and almost linear type themselves, such as we find on some of the most archaic Cretan stones and on the whorls of the earliest settlements of Hissarlik.'

Yet the community existing between this purely linear and the later pictographic class is well illustrated by the appearance on the very seals above referred to of linear forms of the gate symbol which is also one of the most frequent on the more pictorial class. It is probable that both systems reacted on one another.

§ 3. *Early Pictographic Prism-Seals.*

The fresh examples of this class figured on Plates I. [ix.] II. [x.] are all of steatite, three-sided and perforated through their axis.

Nos. 1—5¹ refer apparently to an owner of flocks and herds. As in other examples he is seen either standing (Pl. I. [ix.] Nos. 1, 2) with round-bottomed pots suspended from a pole before him, or either seated or standing and holding a high-spouted vessel (Pl. I. [ix.] Nos. 3, 4) in one case with another before him. No. 5 is unfortunately somewhat fractured, but the object held by the seated figure is more like a drinking-horn.

In three instances (Nos. 1, 3 and 4), the human figure, which must be taken to represent the owner of the seal, is followed on another face of the seal by a goat. In No. 2 its second face contains an imperfect delineation of three human figures.² The third face shows a greater variety of symbols—on No. 1 a spider, on No. 3 an uncertain animal, probably a dog, on Nos. 2 and 4 a star or sun with revolving rays, on No. 5 perhaps a four-petaled flower.

The vase-holding seated figure on No. 6a³ shows a general resemblance to those of the above group. It is however to be observed that the vase in front of him stands upside down. On the next face of the seal are further seen four round-bottomed pots, two as if slung on either side of a central pole, and all together contained in a quatrefoil compartment. The possibility suggests itself that we have here the signet of a potter, and that the vessels hung up in the enclosed space illustrate some primitive method of baking pottery. The third face of this stone represents a scene of the chase in which a hound springs from the side at the hind leg of a running deer. This is an interesting anticipation of a scheme that occurs on lentoid gems of the Mycenaean period.⁴

On No. 7⁵ we see a standing male figure, the head of a ram or moufflon⁶ and four globules or pellets. The same number of pellets is found on other seals and agrees with the duodecimal numeration which seems to have been in vogue in the island at a very early date.⁷

¹ No. 1. from Gonias, Pedeada; No. 2. Lasethi; No. 3. Koprana, Lasethi; No. 4. near Gortyna; No. 5. Spelia near Lamnōn, Siteia.

² Cf. *Cretan Pictographs*, p. 75, Fig. 69 [J.H.S. xiv. p. 344].

³ From Mallia, Pedeada, in the Museum of the Syllogos at Candia.

⁴ Upon one in my collection a dog is seen

flying in the same way at the hind-leg of a wild bull.

⁵ From Milato.

⁶ On a Mycenaean gem recently found at Kastri near Turloti in E. Crete there is what appears to be a representation of a moufflon. This animal is no longer found in the island.

⁷ Cf. *Cretan Pictographs*, &c., pp. 73, 74: [J.H.S. xiv. pp. 342, 343].

No. 8¹ shows two male figures in reversed positions, followed by a goat and two fish. On a Cretan gem in the Berlin Museum,² two men are followed by three fish, a group which also occurs on No. 16 below.

No. 9 from eastern Crete exhibits on the first facet three serrated bars, recalling the later spray and tree symbols, ('Pictographs' No. 58, 59). This is followed on successive faces by a horned animal,—deer or goat,—and a hippocampus, apparently the *hippocampus guttulatus* or *brevirostris* of the Mediterranean, which in a modified form seems to have supplied many sea monsters to later Greek art.³ Two hippocampi are also seen on the transitional Cretan stone, Fig. 46 below, now in the Copenhagen Museum. In Crete this marine animal was specially chosen as a symbol by the inhabitants of Itanos at the easternmost corner of the island, where two confronted hippocampi form the principal types on the reverse of its Fifth Century coins.

On No. 10, from Mallia near Chersonêos, the serrated bar appears between two heads of what seem to be short-horned goats. These symbols are followed by three goats' heads of the same kind, but two hornless. On the third side appears another version of the floral design. Variations of the same figure will be seen on No. 13 headed by the S-shaped double animal already familiar on these early seals. (See 'Pictographs' Figs. 62, 63).

On Nos. 11,⁴ 12, and 14, the two latter found at Mallia between Chersonêos and the site of the Cretan Miletos, we see rude delineations of pigs, in the second instance a group of three. The pig is also found on a three-sided seal of the later class ('Pictographs,' &c. Fig. 24. c.). The other three animals on No. 12 must be regarded as uncertain. The long-legged, long-necked birds repeated on No. 14, as well as on a Cretan seal in the Copenhagen Museum⁵ recall an example on another early seal stone, ('Pictographs' &c. Fig. 64 a.). In the case of the latter stone the suggestion has been made that the bird may represent an ostrich, once more attesting the early commercial relations between the Aegean island and the African Coast. It is remarkable that both Nos. 11 and 12, and 14, show the same succession of pigs and long-legged birds. We have here another instance on the early seal stones of the grouping together of symbols in a parallel sequence, which shows, if any proof were still needed, that these figures were not chosen at haphazard, and that the collective group on the different sides of the stone has a connected and cumulative meaning.

The third design on No. 14 seems to be a spider very naturalistically

¹ From Milato.

² *Cretan Pictographs*, &c., p. 70, Fig. 59 [J.H.S. xiv. p. 339].

³ Salinas, *Ripostiglio di monete antiche di argento* (Rome 1888 p. 7), regards one of these as the prototype of the so-called sea serpent (pistrix) seen on so many Sicilian and Magna-Græcian coins. Cf. Imhoof-Blumer und

Keller, *Tier- und Pflanzenbilder auf Münzen und Gemmen*, p. 73 and Taf. viii, 39; xii. 34, 35; xiii. 18.

⁴ Bought at Athens by Mr. J. L. Myres and presented by him to the Ashmolean Museum. The seal is clearly of Cretan fabric

⁵ I have to thank Dr. Blinkenberg and the Director for an impression.

rendered in profile.¹ The spider has been already seen as viewed from above, on No. 1 and it recurs on No. 15 so that it seems to have been a favourite Cretan symbol. We shall find it again on two stones representing the more conventionalised stage of the 'pictographic' script.²

The frequency of the spider on these seals is specially remarkable when it is remembered that this insect is conspicuous by its absence on the engraved stones, and coin-types of the classical period of Greece,³ though other insects such as the ant, the bee, or the cicada are common enough. In Greek mythology the spider appears in the legend of Arachnē as the representative of Lydian textile art, and with that old Anatolian race this insect evidently typified the spinning industry. The undoubted affinities between the earlier indigenous elements of Crete and those of Western Asia Minor makes the prominence of the spider in its primitive pictographs the more suggestive, and we may infer that here, too, the insect as a symbol indicates the possession of looms. In this connexion it is worth while recalling the fact that the three seals representing spiders, of which the provenience is exactly known, come from that part of the island in which the Cretan Miletos, now the village of Milato, the reputed mother-city of the better-known Carian and Ionian homonym, was, from Homeric times onwards the chief civic centre.⁴ The localization of the myth of Arachnē at the once Lydian and Maeonian Kolophôn, and the occurrence of the spider signets in the mother-country of the not distant Milesians are, perhaps, not altogether accidental coincidences.

It will be shown in a succeeding section⁵ that the spider,—probably with the same significance,—recurs on a primitive class of Egyptian cylinders and on Libyan seal-stones. On the stone No. 15 the spider is coupled with a floral emblem resembling that on No. 5, and the solar or stellar disk with revolving rays. The former association recalls the fact that, on one of the conventionalised pictographic seals referred to,⁶ the spider and a similar quasi-floral design succeed one another at the end of one line and the beginning of another.

The two birds on No. 16, from Mokhos, Pededa,⁷ are shorter-legged and apparently of a different kind from those described above. They somewhat recall the bird on a seal previously described ('Pictographs,' &c., Fig. 65a) from central Crete, in which I ventured to trace a resemblance to a cock. The group of three fishes also recurs on another early seal ('Pictographs,' &c., Fig. 59c). The design on the third face of No. 16 is a four-handled vase, a type which is also seen on No. 11c.

On another three-sided seal, not figured in the Plates, from Kavuse in

¹ It is probable that the two objects on a Cretan gem in the Berlin Museum ('Pictographs' &c. Fig. 59b.), described by me *loc. cit.* as 'polyp-like,' are also intended to represent spiders.

² See below, p. 335, Fig. 5b and p. 336, Fig. 6b.

³ No single representation of a spider occurs in Imhoof-Blumer und Keller, *Tier- und Pflanzenbilder auf Münzen und Gemmen des*

klassischen Alterthums.

⁴ The seals Nos. 14 and 15, were from Mallia the site of an ancient settlement on the north-east coast, a little to the west of Milato. No. 1 came from Goniais in the hill-country above.

⁵ See below p. 364, Fig. 29 and p. 368, Fig. 32.

⁶ See below, p. 336 Fig. 6a, b.

⁷ In the Museum of the Syllogos at Candia.

eastern Crete,¹ the disk with revolving rays, seen on Nos. 2, 4 and 15, occurs in a variant form. It is accompanied on the other faces of the stone by the figure of a rude animal and a goat. The rayed disk is also found in juxtaposition with a goat's head on a seal of the later class ('Pictographs,' &c., Fig. 33c). In connexion with the goat it has already appeared in No. 4 above.



FIG. 2.—BLACK STEATITE, MALLIA. [‡].

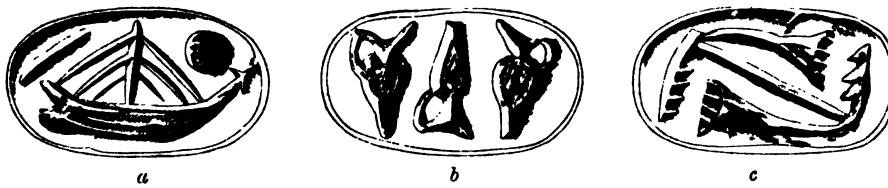


FIG. 3.—YELLOW STEATITE, ELUNDA (OLOUS). [‡].

§ 4. *Later Seals with Conventionalised Pictographs.*

Class A. Transitional (in soft stone).

The three following seals, Figs. 2, 3 and 4, which stand in a very close relation to one another, though in many respects fitting on to the preceding class, show an elongated form more characteristic of the later series with the advanced pictographic script, and of the time when hard stone such as cornelian or chalcedony had begun to supersede steatite for such purposes. This is particularly the case with Fig. 3 where the group of three high-spouted vases corresponds with that on a prism-shaped seal already published ('Pictographs,' &c., Fig. 21). This seal, though also of steatite and of primitive execution, is there, nevertheless, classed with the later pictographic group, owing to the appearance on the second face of the stone of two of the most characteristic signs belonging to that series. Both it and the present seal may, in fact, be regarded as transitional in type.

Fig. 2, found at Mallia, between Chersonesos and the site of the Cretan Miletos (Milato), and Fig. 3, found at Elunda, or Elunda, the site of the ancient Olous, show on the first face in the order here given, a ship, and in the second respectively, a single vase and a group of three vases. The third place is filled

¹ Seen by me there in 1893.

on Fig. 2 by an animal, on Fig. 3 by a group of comb- and rake-like objects, the arrangement of which, however, is of decorative origin.

The ship on Fig. 2 is remarkable from the fact that the mast is only connected by ropes with the forepart of the ship. The other vessel (Fig. 3) has, as usual in all early Cretan seals and gems representing ships, ropes attached to the mast on either side. The discovery of this seal on the site of Olous is interesting, as conveying a hint of the very early maritime enterprise of that port,—now the land-locked lagoon of Spinalunga,—whose sheltered waters must have afforded every facility for primitive navigation.

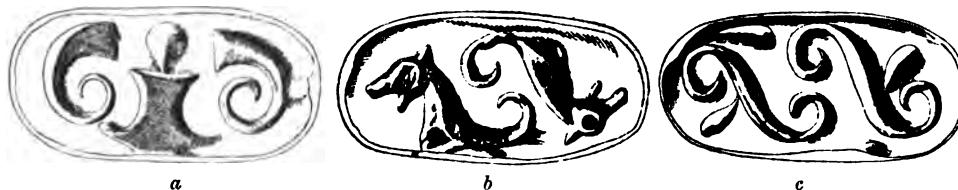


FIG. 4.—STEATITE, CRETE. (COPENHAGEN MUSEUM.) [‡].

With these two maritime signs may be grouped Fig. 4, a Cretan specimen in the Copenhagen collection,¹ also of steatite, and belonging to the same transitional class. It exhibits on its first face an instrument, perhaps an *arbelon* for cutting leather, which is of frequent occurrence in the later series. It is here placed between two trumpet-like scrolls, also found on some later seals.² There follow on the two other faces a pair of hippocampi and two S-like scrolls.

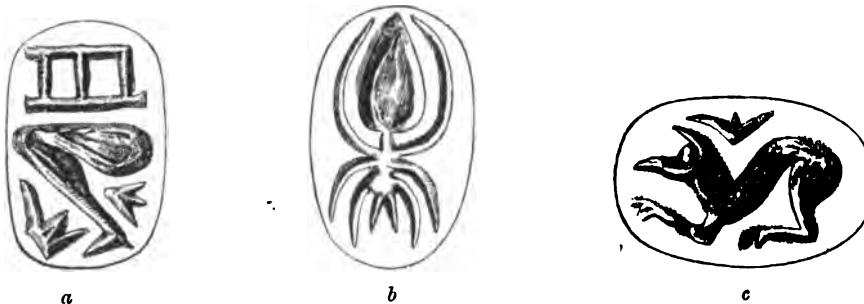


FIG. 5.—STEATITE PRISM-SEAL, FROM IMPRESSIONS OBTAINED AT CANDIA. [‡].

The dull white steatite seal, Fig. 5, taken from an impression obtained at Candia, is a typical example of the earliest of the more advanced pictographic class. The soft stone of its material, and the style of its engraving, place it, however, very near the transitional seals, Figs. 2, 3 and 4, with which it is here grouped.

¹ Impressions of this seal and that figured on Plate II. [x.] No. 13 were due to the kindness of Dr. Chr. Blinkenberg.

² See below, p. 342, Fig. 11 and p. 343 Fig. 13.

The collocation of the gate and bent leg symbols occurs on three other seals ('Pictographs,' Figs. 22b, 25a, and 34b)—the gate somewhat variant in the latter case). We have here, therefore, another proof that the grouping of these pictographic characters was not arbitrary but that they were combined according to a definite system in order to give expression to ideas.

This repeated combination of the bent leg and gate makes it probable that the T-shaped sign coupled with the gate in the group of linear characters on the early seal ('Pictographs,' Fig. 36d) is the linearised equivalent of the bent leg. The spider of the following facet has been already noted on Nos. 1, 14 and 15 of the early series as probably connected with the spinning industry. The animal is perhaps a wolf; witness the appearance of the wolf's head among the more abbreviated pictographs,¹ of which a fresh example is given below.² It is possible, however, that in all cases we have to do with a dog of wolf-like breed. At the present day the dogs in parts of the Balkan peninsula are hardly distinguishable from wolves in their external aspect.



FIG. 6.—FOUR-SIDED SEAL FROM SITEIA. [?].

Class B. Seals with fully-developed conventionalised pictographs. (Hard stone).

Fig. 6, a perforated quadrangular stone from Siteia, is a pictographic seal of considerable interest. The seated figure with which the first line (as given above) begins, recalls the same subject on so many of the seals of the earlier class, and establishes a new link of connexion with them. The spider at the beginning of line b and the quatrefoil of line c also recur on the earlier series. The second sign of line b may be regarded as a variant of the 'arbelon'

¹ See 'Pictographs,' etc. p. 41 [J.H.S. xiv. p. 310, No. 43].

² See below, p. 343.

symbol ('Pictographs,' No. 16), while the third is certainly the adze (No. 22). The other types are already well ascertained, namely, the gate,¹ double axe,² mallet,³ spiral,⁴ and mountain-symbol.⁵

Fig. 7 represents a white steatite seal found in Crete and now preserved in the Central Museum at Athens. It resembles in every way the stone seals of this class. An imperfect figure of this seal was given as far back as 1872 by Dumont in his *Inscriptions Céramiques de la Grèce*.⁶ Dumont—who erroneously described its material as ivory—compared it to the gladiatorial *tesserae*, and explained the ship as an allusion to the naval sham-fights of the amphitheatre. The fourth face of the seal he allowed to be enigmatic, but in the reduplicated symbols of line 3,—similar to that above identified with the plough,—he saw pairs of wrestlers, and in the goat's head an *aplustre*. The comparative materials now collected will at least have served to set at rest some of these speculations. They illustrate the difficulty, which all archaeologists must experience, in interpreting isolated objects of an unprecedented type.



FIG. 7.—WHITE STEATITE SEAL, CRETE. (CENTRAL MUSEUM, ATHENS.) [?].

The two broader sides of this seal seem to stand by themselves; to judge by the bird and ship, they are somewhat more pictorial in character than the others. Both in these and the others we notice that the position in which the same sign is placed is capable of variation. The spray or tree-symbol occurs with its central stem running upwards in *a* and downwards in *b*. The plough-like symbol in *c* faces two ways. The instrument at the

¹ 'Pictographs,' No. 25.

⁶ Pp. 415, 416. No attempt was made to represent face *a*. I am indebted to Professor Halbherr for this reference and to Dr. Stais and M. Gilliéron for a cast of the object in question.

² *Ib.* No. 10.

³ *Ib.* No. 18.

⁴ *Ib.* Nos. 69, 70.

⁵ *Ib.* No. 6d.

right end of *c* and *d* is seen in reversed positions. Most of the signs are placed as if to be looked at horizontally, but the two animals' heads—the second character from the right end of face *c*, and the fourth from the left end of line *d*—and the mountain sign in *c*, are placed as if the column was to be read vertically. Their relative positions seem to indicate that line *c* is to be read from left to right, and *d* from right to left—another instance of the *boustrophedon* arrangement already noted in other cases.

The ship on face *b* recalls a somewhat similar example on a four sided chalcedony seal from Crete (now in the Berlin Museum), figured in 'Pictographs,' &c., No. 34. Here as there it may be taken that the seal belonged to a merchant who traded over-sea. The characteristic ends, like an open beak, and the double rudder recur on lentoid gems of Mycenaean date from Crete.

Several of the signs represented on the present seal are already familiar on the Cretan seal-stones. Thus we find the arrow-head and shaft ('Pictographs,' No. 136.), the 'arbelon' (*ib.* 16), the mallet (*ib.* 18), an instrument of a similar kind, but with a triangular handle, the 'plough' already seen on the seal Fig. 6 above, and another indeterminate object (4 from the left end of line *d*), also paralleled by the second symbol on the same seal. The ship, already noticed ('Pictographs,' No. 32) the tree-symbol (*ib.* No. 58), the crosses, plain and knobbed, the goats' head (*ib.* No. 35), the 'deer-horns' (*ib.* No. 38) the figure like an imperfect caduceus (*ib.* No. 71), all recur here. In other cases we have variants of known forms, thus the zigzag (3 of l. *a*) seems to be the same as 'Pictographs,' No. 75 with a terminal flourish, the cross-legged bird may be regarded as an alternative form of No. 47, and the animal's head (No. 4 of l. *d*) may be identified with the ass's head of the above-cited seal (Fig. 6*a*).

Six of the signs here represented, however, occur apparently for the first time. These will be considered separately on pp. 339, 340 below.

A noteworthy feature of this seal is the frequent repetition of the symbols in the same line. Thus in line *b* we have the tree-symbol occurring twice separately and in a group of four. In line *c* the plough-sign appears six times, divided into three groups of two each by that which seems to signify mountains or, more generally, land. In line *d* the arrow occurs three times.

The same characteristic has already to a certain extent been exemplified by other Cretan seals. Thus the vase symbol occurs three times in succession on the stone engraved in 'Pictographs,' Fig. 21 and again in Figure 3*b* above. The cross pommée begins and ends another line of a seal (*ib.* Fig. 34*d*) and the *S* symbol is twice repeated in the same way (*ib.* Fig. 21*a* and 23*c*).

In ancient Egyptian the plural was sometimes formed by repeating a hieroglyph of either the ideographic or alphabetic class, three times, and reduplications of signs are also frequent. Such repetitions are, however, especially characteristic of the Hittite inscriptions. In the first line, for

instance, of the Hamath Inscriptions, Nos. 1 and 2,¹ we find one sign repeated four times in two successive groups of two, and another forming a group of three.

It is worth remarking that the beginning of line *d* of the present seal, which from the direction of the goat's head may be taken to read from right to left, contains the same symbols as those of the last line of the quadrangular stone seal from Siteia (Fig. 6 above), though the arrangement is somewhat different and the goat's head is here substituted for the S symbol. In both groups as will be seen from the comparative figures below Fig. 8, we find the oblong instrument with triangular handle, the plough (in the present case twice repeated), and the 'mountain,' or 'land' sign. It is highly improbable that this parallel grouping is accidental.

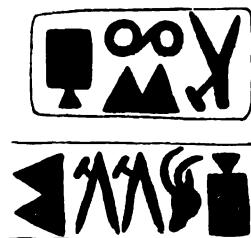
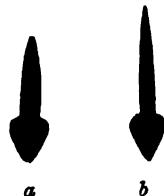


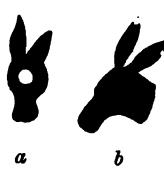
FIG. 8.—COMPARATIVE GROUPS OF SYMBOLS FROM FIGS. 6 AND 7.

The following is a detailed list of the conventionalised symbols that occur on the two last-mentioned seals (Figs. 6, 7) for the first time, including the spider already seen on Fig. 5*b*. For convenience of reference the numbers follow on to the list of pictographs² in my former work.

83.



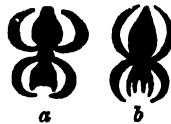
84.



Apparently an ass's head. Compare the characteristic Hittite sign (Wright, *Empire of the Hittites*, Plates VIII., IX., X., XI., and XIX. 5, Jerabis).



85.



The Spider. Cf. p. 333 above, and for Libyan and Proto-Egyptian parallels, pp. 364, 368 below. 85*b* is from Fig. 5*b* above.

¹ Wright, *Emp. of the Hittites*, Plate i, H. I and H. II.

² Pp. [302] 33-[315] 46.

86.  Compare the floral designs on the earlier series of prism-seals.

87.  I have placed this sign in the above position as it seems to represent the primitive form of plough, in which the pole and the share-beam were in one piece, the handle only being attached.

88.  (No. 4 of Fig. 7a). Seems to represent a woman's breasts. Compare the Egyptian sign  *Mna.* = a nurse, &c.

89.  (No. 8 of Fig. 7a). Apparently a gourd.

90.  (No. 2 of Fig. 7d). A kind of crook. The Egyptian  = *S* may possibly be compared.

91.  (No. 5 of Fig. 7d). The sign is here placed with the projections uppermost since some other symbols in this line—notably the familiar instrument No. 11, and that at the end—are in a reverse position to that in which they are usually found. Placed as above, this character is identical with the Egyptian  = *ha, ah*, the meaning of which is a 'palace' or 'altar.' We  have here therefore a clear example of a character in the Cretan series directly borrowed from the Egyptian.

92.  (No. 6, 10 and 13 of Fig. 7d). It resembles the stem-less Mycenaeans type of arrow-head, here shown without the shaft.

93.  (No. 7 of Fig. 7d). Possibly a mirror; the more oval figure at the end of line *a* is apparently only a variant of this.

Fig. 9*a* and *b*, a white agate with translucent veins, from Gortyna, belongs to a class already signalised in my former communication¹ as seal-stones with a single engraved face and with their upper part convoluted.

¹ 'Pictographs' &c., p. 19 [288], Fig. 21 and p. 29 [298], Fig. 38.

The lower part of its field is occupied by a conventionalised lion's head full face, with a kind of fleur-de-lys, more probably an abbreviated palm-tree,¹ rising above it. Above this—which may, perhaps, be regarded as a badge of a more personal character—are two symbols, a kind of extended N, and what appears to be a species of polyp.



a



b

FIG. 9.—CONVOLUTED AGATE SEAL-STONE FROM GORTYNA. [f].

This conjunction, again, is of great interest, since the same two symbols occur in juxtaposition and attached to one another by a kind of network on the four-sided seal stone ('Pictographs,' &c., Fig. 34d). This network, or cross-



a b

FIG. 10.—COMPARATIVE GROUPS OF SYMBOLS.

hatching, is frequently found as an adjunct of Cretan symbols. It does not seem to have an independent value, being, sometimes, a merely ornamental fill-up, covering the whole background of the seal as in Fig. 11, to be described below.² Occasionally however it seems to mark off one symbol from others

¹ Compare *op. cit.* p. 43 [312] No. 5 and the Hittite fleur-de-lys symbol from Hamath (Wright, *Empire of the Hittites*, Pl. iv., ii. 2 and 3). In the present case however its conjunction with the lion's head

suggests the palmettes seen behind conventionalised lions on one of the shields from the Idaean Cave, Halbherr and Orsi *Antichità dell' Autro di Zeus*, Atlas Tav. ii.

² P. 342; cf. too, 'Pictographs,' &c. Fig. 33a.

of a group,¹ or, as in the above instance, to bring two into a connexion separate from the rest.

The 'polyp' sign seems to have played an important part in the Cretan series. We shall find it in connexion with linear characters in the important monument to be described below.²

§ 5. *Signet-shaped Stones with Conventionalised Pictographs and Other Figures.*

In the course of recent explorations in the Eparchies of Siteia, Girapetra and Mirabello, I came across examples of a wholly new class of Cretan seal-stones, in shape very much like modern seals, cut out of jasper and cornelian³ (Figs. 11, 12, 13, 16, 17). Though of smaller size, their essentially modern form shows a certain parallelism with some Hittite and Syrian types, amongst which, as in the case of the silver seal from Bor, metal forms also occur.

These Anatolian types are inferior, both in form and material, to the Cretan. They are thicker and heavier, and instead of the jasper and cornelian, are formed of haematite,—which gives them a very metallic appearance,—and of light-coloured steatites. Examples have been found both at Tyre and at Sidon,⁴ and one of a similar form was obtained at Palaeokastro on the Laconian coast.⁵

The signet shape of these Cretan stones and the analogy that they present with Hittite seals, is of special value as showing that the symbols engraved on them had a direct personal significance.

The designs themselves are both pictorial and ornamental and of the conventionalised pictographic type.



FIG. 11.—GREEN JASPER SIGNET, 'Stò Dáso. [i].

The seals, Figs. 11, 12, must be included in the true pictographic class. Fig. 11a and b, of green jasper, was found in a prehistoric *phrourion* called

¹ Cf. *Op. cit.* Fig. 84c, where the central sign is thus marked off.

² See p. 359, Fig. 27.

³ Since this was written, a similar example, also from Crete, has been published by Dr. Furtwängler in his description of the engraved stones in the Berlin Antiquarium, *Beschreibung*

&c. No. 88, p. 10 and Taf. 3. See below.

⁴ These are in my own collection. That from Tyre shows a 'hatted' Sphinx boldly cut in a style somewhat recalling the coarser Melian work.

⁵ In the Ashmolean Museum, Oxford. See 'Pictographs,' &c., p. 74. [J.H.S. xiv. p. 843.]

'Stò Dáso in the upland glen of 'Stà Limnia, visited by me on the way from Xero to the site of Ampelos. The symbols consist of the ' polyp,' the goat's head, a coil very like the figure 6, and the mallet, of which all recur on other seal-groups, the 6-shaped scroll answering to the trumpet on Fig. 4 above.

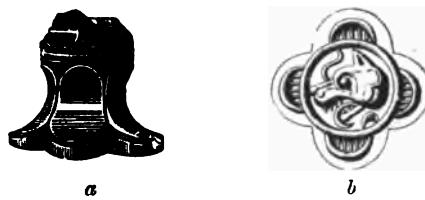


FIG. 12.—RED CORNELIAN SIGNET FROM KEDRIE NEAR GIRAPETRA (HIERAPYTNÄ). [?].

Fig. 12a and b was found at Kedrie, above Girapetra, an ancient site, abounding in Mycenaean remains, probably answering to the ancient Larisa, which stood in the neighbourhood of Hierapytna. The seal is of red cornelian and of exquisite work, though the top is slightly broken. The quatrefoil and moulding is most delicately wrought, and the intaglio on the face of the seal is finely engraved. The subject is specially interesting as representing the wolf's head with protruding tongue, a symbol equally characteristic of the Cretan and the Hittite series, standing alone within an ornamental border. It follows that this symbol could represent some object or idea by itself, without copulation with any other sign.



FIG. 13.—GREEN JASPER SIGNET FROM SITE OF PRAESOS. [?].

On a green jasper signet of the same class from the site of Praesos (Fig. 13) three coils resembling the third symbol on Fig. 11, are symmetrically grouped, and the design must be regarded as of decorative origin, whether or not the three coils had afterwards acquired a more definite meaning. The design, in fact, goes back to a triple scroll which already occurs on a very early class of Cretan button-seals of dark steatite, on others of which distinct imitations of Twelfth Dynasty scarab decoration are visible.¹ An example of this class with a triple coil from central Crete is given in Fig. 14. A still further link in the chain is supplied by Fig. 15, a seal of brown steatite, which has been placed among the Assyrian specimens in the Louvre, but the Cretan

¹ The seals c., g. and h. Fig. 49 in 'Pictographs' &c., p. 58 [J.H.S. xiv. p. 327] belong to this class.

origin of which may be regarded as highly probable. It shows the same kind of trefoil scroll as that of the button-seal, but in a more developed form. It has at the same time acquired a stem and taken the characteristic signet

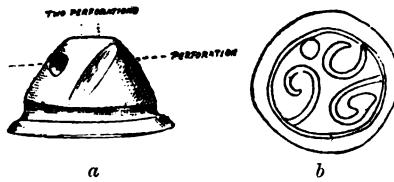


FIG. 14.—STEATITE BUTTON-SEAL: CENTRAL CRETE. [1].

shape. It would thus appear probable that the very ancient sub-conical type of Cretan bead-seals,—perhaps under the influence of Anatolian example,—gradually developed into the signet proper. The specimen represented in

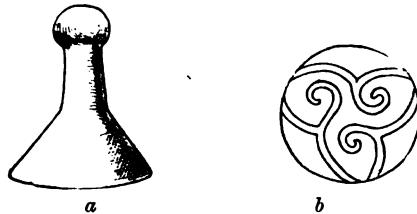


FIG. 15.—STEATITE SIGNET, LOUVRE. [1].

Fig. 15 shows that this evolution was already effected in the *prae-Mycenaean* period. The three scrolls of the Mycenaean signet, given in Fig. 13, will thus be seen to preserve a record of its remote ancestry on Cretan soil.



FIG. 16.—YELLOW CORNELIAN SIGNET FROM KHADRA. [1].

A good example of the pictorial style is afforded by a yellow cornelian signet from Khadra, in Siteia (Fig. 16). It represents two wild goats browsing on a rocky peak, and is of great importance as supplying from its artistic style a chronological equation for the pictographic seals of the same class.

The purely naturalistic treatment of the design distinguishes it alike from the rude representations of the geometrical class and the conventionalism of the orientalising school of engraving, illustrated by the 'Melian' gems. The intaglio on the other hand lacks the boldness of the earlier Mycenaean art and must be placed somewhat late amongst objects of that category. The interlacing scroll work round the centre of the stem of the seal shows a certain approximation to the guilloche ornament frequent on Cretan *pithoi* from the eighth century onwards, though the more oval form here seen still bears a closer affinity to some Egyptian scarab-borders of the Eighteenth Dynasty.¹ On a jasper seal of the same type from Goulas (Fig. 17) is seen a lion of conventional pose, the head of which, except for the absence of the *fleur-de-lis*, bears a great family likeness to the lion's head on the convoluted seal, Fig. 9, described above,—an interesting indication of the synchronism of these two types of seal.



FIG. 17.—JASPER SIGNET, GOULAS. [?].

A similar figure of a lion also occurs on a triangular prism-seal of the elongated class in the British Museum. Like the others it was found in Crete, and the designs on all three faces are in the same, curiously mannered style.² It may be regarded as one of the latest representatives of its class, which is thus seen also to have overlapped the 'signet-shaped stones' with which we are dealing.

A broken crystal signet, with a lion of a conventional type, allied to the above, was also observed by me in the village of Mallia, and a certain approximation to the later class known as 'Melian' is unmistakable in these types. This is further borne out by a Cretan signet stone of the same kind in the Berlin Museum.³ It is of yellow jasper and bears two dolphins with spiny backs, the general character of which betrays distinct affinities with certain Melian types. The pellets surrounded by dots, which occupy the central space between the dolphins on this seal, are also suggestive of a somewhat late date. A similar dotted rosette is seen in the field of an archaic scaraboid in the British Museum.⁴

¹ E.g. Scarab of the Princess Nefrura (c. 1500 B.C.), Petrie, *History of Egypt during the Seventeenth and Eighteenth Dynasties*, p. 78 Fig. 39.

² B.M. *Catalogue of Gems*, No. 99. It is thus described, p. 45: 'Triangular prism with rounded ends (a) Lion to l. Chiefly executed by means of circles and semi-circles (b) Goat lying down to l: tree(?) and circles in field. (c)

Deer with large horns lying down to l; circle in field. Green Jasper. Crete.'

³ Furtwängler, *Beschreibung der geschnittenen Steine im Antiquarium*, No. 88, p. 10 and Taf. 3.

⁴ B.M. *Catalogue of Gems*, Pl. B. 113 p. 47. 'Deer standing to l, looking back and suckling young; branch in field and pattern of drilled holes above. Hämatite. Egypt.'

There are, it will be seen, strong indications that the Cretan class of signet-shaped intaglios continued in use to the later Mycenaean period in the island, and coincides in the main with the whole duration of what may be called 'the Early Hard-Stone Period' of Aegean glyptic art. That period, which answers to the period of Mycenaean art in its widest extent, was characterised by the use of harder materials, such as cornelian, jasper, crystal, and amethyst for engraved seals and gems. The more primitive artists of the preceding age had confined themselves to the soft steatite, and in the time of diminished technical skill, characterised by the Melian class of 'island stones', which succeeded the close of the Mycenaean period, the engravers relapsed into the use of the same soft material. The ability to work harder stones may have survived somewhat longer in Crete,¹ but the general tendency of the evidence precludes us from bringing down even the latest examples of this Cretan class of signets beyond the eighth or ninth century before our era. The earlier and bolder types go back considerably before that date.

§ 6. *Seals and other Objects with Linear Signs.*

The lentoid bead of dark steatite, Fig. 18, was found on the site of Knôsos. It seems to be an early representative of its class, otherwise so frequent among Mycenaean gems. The engraving here is of a linear kind, and is very different from the bold cutting usual on gems of that period, and the dark steatite of which it is composed, though not unknown among the Mycenaean intaglios of Crete, is more generally associated with primitive work.



FIG. 18.—LENTOID BEAD OF DARK STEATITE, KNÔSOS. [?].

In the centre is a kind of dart or arrow symbol with a lozenge-shaped butt, and on either side of this, two branches or sprays. These vegetable motives with a star between recur on another dark steatite lentoid gem of the same character from central Crete,² on the other side of which are two more

¹ An octagonal signet of simple conical form and of green steatite from Crete in the Berlin Museum, (*Beschreibung &c.* No. 81, p. 9 and Taf. 2.) representing a Sphinx, exemplifies the

fact that in Crete too during the succeeding period there was a return to the softer material. In my collection.

sprays of a different shape. A double spray also occurs on an early lentoid gem of light green steatite from Amorgos.¹ All three gems agree in the early character of the design and material, though the latter is more deeply cut. They belong in fact to a well-marked though hitherto unrecognised class of *prae-Mycenaean* or *proto-Mycenaean* lentoid gems in soft stone.

The early character of the present gem lends a special interest to the two linear signs which appear outside the spray on either side of its margin, and which are almost identical with the Cypriote signs $\Lambda = ko$ and $\kappa = e$.



FIG. 19a.—BLACK STEATITE WHORL, KNÓSOS. [1].



FIG. 19b.

The black steatite whorl, Fig. 19a, was also found on the site of Knossos. The monogrammatic characters (Fig. 19b) on its upper circumference have in some respect such a comparatively modern aspect that they might be thought to be a recent addition. A minute examination with a strong lens reveals the fact, however, that the edges of the incisions are slightly worn and that in fact they belong to the same date as the whorl itself,—probably the latest *prae-Mycenaean* period. The characters themselves, moreover, find some close analogies among certain primitive signs found in Crete and elsewhere. This may be seen from the comparative forms given on Fig. 20. Of these *a* is from the vase handle found at Mycenae,² *b* from the early Cretan pot found at Prodromos Botzano,³ *c* is a proto-Egyptian sign from Naqada,⁴ *d*, a form of S on the Minaeo-Sabaean inscriptions of Southern Arabia which go back to about 1500 B.C.⁵

The monogrammatic sign reproduced in Fig. 21—long-stemmed like the central character of Fig. 18—was engraved on a sherd of pottery, picked

¹ In my collection.

² Tsountas *Mycénai*, p. 214, Figs. 3; Tsountas and Manatt, *The Mycenaean Age*, p. 269, Figs. 1, 138, 139.

³ *Pictographs, etc.*, p. 10 [279], Fig. 56.

⁴ Petrie, *Naqada*, Pl. LIV., No. 262.

⁵ Fritz Hömmel, *Süd-Arabische Chrestomathie*.

up on the height of Keraton, one of the loftiest among the 'Cyclopean' strongholds of Crete.¹ The sherd on which this graffito occurs is of a reddish and some-

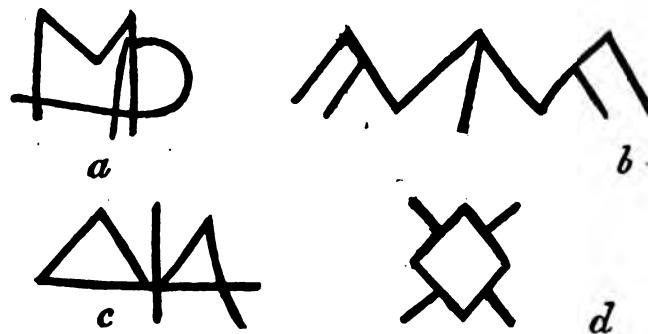


FIG. 20.—COMPARATIVE EXAMPLES OF MONOGRAMMATIC SIGNS.

what micaceous clay of the same character as that of hundreds of plain fragments of vases, which from their association here with portions of painted Mycenaean



FIG. 21.—LINEAR CHARACTER ON SHERD FROM KERATON.

larnakes seem to represent a local fabric of that period. There was no trace of any later Hellenic occupation of this primitive stronghold, which from



FIG. 22.—YELLOW STEATITE SEAL, KALAMAFKA. [?].

a height of about 2000 feet, commands a large part of the southern coast of the island, from Girapetra to the spurs of Ida.

¹ See *Academy*, July 18, 1896 (p. 54).

The seal Fig. 22, was found in a primitive akropolis above the village of Kalamafka in south eastern Crete, where I obtained it in April, 1896. It is even more purely natural in its formation than the rude three-sided stone already mentioned in Fig. 1. It is simply an almost unworked finger-end of steatite which seems to have been thought handy for sealing purposes, and the end of which has been cut flat and engraved with three characters one over the other. Of these the top one, a plain oval and the lowest, perhaps intended to represent a pair of curving horns, are new to the Cretan series. The central sign somewhat resembles the 'polyp' symbol, not infrequent in the pictographic series (see above p. 343), but the two upper tails are here more elongated. In its more usual form, it occurs with linear characters on the libation-table from the Diktaean Cave to be described below.¹ The horned symbol which occupies the lowest place on this signet somewhat resembles the Egyptian hieroglyph *ap*.

§ 7. *Inscribed Vase from Cerigo.*

The island of Cerigo, the ancient Kythera, may be regarded as a stepping-stone between Crete and the Peloponnesian mainland. Professor Sayce informs me that a prism seal with a variety of conventionalised pictographic

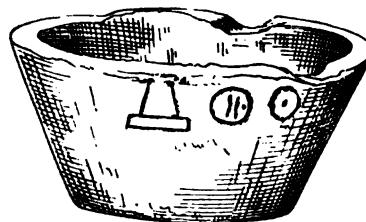


FIG. 23.—INSCRIBED MARBLE VASE FROM CERIGO (KYTHERA).



FIG. 24.—CHARACTERS ENGRAVED ON VASE FROM CERIGO.

symbols has been recently found in the island, apparently in company with a lentoid gem of the ordinary Mycenaean type. I have not however been able to obtain an impression of the seal.

Thanks to the kindness of Dr. Stais and of its proprietor, M. Spiridion Stais, Deputy for that island, I am able to give a representation of a small marble vase (Fig. 23), also found in Cerigo, containing three characters (Fig.

¹ See p. 352.

24) the two latter of which at any rate are of the linear class. The material employed and the simple form of the vase, seem to show that it belongs to the latest *prae-Mycenaean* or 'Amorgian' period.¹

Of the signs represented, the second greatly resembles the Egyptian  *Sep* = times (*Vices*). The third sign has been regarded in the first part of this work² as a form of the eye-symbol. It may also be compared with the hieroglyph  signifying the solar disk.

The first sign, is of a more remarkable character, and has the appearance of a truncated obelisk standing on a base, with another slab resting on its summit. Obelisk-like figures are found among Egyptian hieroglyphics³ but in this case the slab above and below suggests an altar, or perhaps, an aniconic image, analogous to that representing the Paphian goddess.

§ 8. *Inscribed Libation Table from the Diktaean Cave.*

Hitherto, with the exception of some more or less isolated signs on the gypsum blocks of the prehistoric building at Knôsos, the evidence of the early Cretan Script has been confined to seal stones and *graffiti* on vases. I am now able to call attention to a monument of a different class, bearing what appears to be a prehistoric dedication in well-cut characters belonging to the linear type of the Cretan writing.

The scene of this discovery was the great cave on the steep of Mount Lasethi, above the village of Psychro, which must certainly be identified with the Diktaion Antron of the Lyttian traditions. It lies, in fact, only four and a half hours distant from the site of Lyttos, with which it was connected over a low mountain pass by what appears to have been a very ancient road-line. This cave, according to the Lyttian legend preserved by Hesiod,⁴ was the birthplace of Zeus, and the votive relics discovered in extraordinary abundance attest, in fact, the existence there of a cult identical with that of the Cave of Zeus on Mount Ida.

The ancient remains of the Psychro Cave were, for the first time, explored in 1886, by the Italian archaeologist, Professor Halbherr, in company with Dr. Hazzidakis, President of the Syllogos of Candia. In their work on the

¹ The inscription is given in Tsountas and Manatt, *The Mycenaean Age*, p. 279, but the first sign is there imperfectly rendered, the upper slab above the truncated obelisk, of which distinct traces are visible, having been omitted. The vase is there described as being of a familiar "Island" form, from which I infer that Dr. Tsountas also refers it to the earlier Aegean period. Fig. 24 was executed, with the aid of photography, by Mr. F. Anderson from the cast supplied me by Dr. Stais.

² 'Pictographs' &c., p. 34 [J.H.S. xiv. p. 303].

³ The ideograph *hai* is a rounded stele on a base; *txn*, an obelisk also on a base.

⁴ *Theogonia* v. 477 *seqq.* (Rhea has taken counsel with her parents Ouranos and Gaia):
 πέμψαν δ' ἐς Λύκτον, Κρήτης ἐς πλονα δῆμον,
 διππότ' ἄπ' ὀπλότατον παῖδων ἡμελλε τεκέσθαι,
 Σῆνα μέγαν τὸν μὲν οἱ ἐδέξατο Γαῖα πελώρη
 Κρήτη ἐν εὐρεῖ τραφέμεν ἀπιταλλέμεναι τε.
 Καθα μιν Ἰκτο φέρουσα θύην διὰ νύκτα μέλαναν
 πρώτην ἐς Δίκτην κρύψεν δέ ἐ χερσὶ λαβούσα
 ἄντροφ ἐν ἡλιθάτῳ, ζαθῆς ὑπὸ κεύθεσι γαῖης
 Αἰγαλῷ ἐν δρει, πεπυκασμένῳ ὑλήεντι.

Idaean Cave, Halbherr and Orsi describe the results of some excavations near the mouth of the Cave and also various relics discovered there by the peasants in the course of 'tumultuary' diggings.¹ In 1894, during my travels in that part of Crete, although unable at that time to visit the spot, I procured from the peasants many additional objects in the shape of bronze arms, votive and otherwise, and small figures of men and animals. In the following year I was able to visit the Cave in company with Mr. J. L. Myres, and to secure further materials illustrating the character of its deposits. At the time of our visit in 1895, it being the holiday-time of the Greek Easter, a large part of the male inhabitants of the village were engaged in grubbing in the interstices of the boulders. The huge masses of fallen rock with which almost the whole of the vast entrance hall of the Cave is strewn, preclude anything like systematic excavation on a large scale within the Cave except at an enormous expense. Here and there, however, a few square metres of less encumbered soil enabled us, at least, to gauge the character of the deposits.

Among the excavators was a youth who, shortly before my return to the Cave in April, 1896, and in anticipation of it, dug down to its rock floor in a comparatively unencumbered part at the lowest level of the vast entrance hall. On my arrival he showed me several clay bulls and figures of the usual Mycenaean class obtained through his dig, together with several plain terra-cotta cups to be presently referred to. As a matter of comparatively minor importance, he informed me that he and a friend, who had helped him in the excavation, had found at the bottom of the hole a 'broken stone, with writing.' It may readily be imagined that I lost no time in securing the stone and also in ascertaining on the spot the exact circumstances of its position. The stone proved to be a dark steatite fragment of a low table exhibiting cup-shaped hollows with raised rims, similar to those of the stone libation tables of ancient Egypt. The form of the table had been oblong with four short legs and a central stem. It had originally possessed three cups, the central one somewhat larger than the other two, but the part of the stone containing the left-most of these was broken away. Its most remarkable feature, however, was part of an inscription clearly cut along the upper margin of the table in the prae-Phoenician script of Crete.

A view of the remaining portion, as well as of the whole table restored in outline, will be seen in Figs. 25a, b and c.

I at once made arrangements to continue the excavation at the spot where the inscribed object was found, partly to ascertain if the remaining fragment of the stone table was discoverable, partly to gain an accurate idea of the deposit from beneath which the part now brought to light had been extracted.

The inscribed block lay at the point indicated in the sketch plan (Fig. 26) of the great entrance hall or 'Atrium' of the cave near its inner wall and on the rock floor, at this point about two metres below the existing surface of the ground. I dug out a space of about sixteen square metres all

¹ *Antichità dell' antro di Zeus Ideo*, p. 216 seqq.

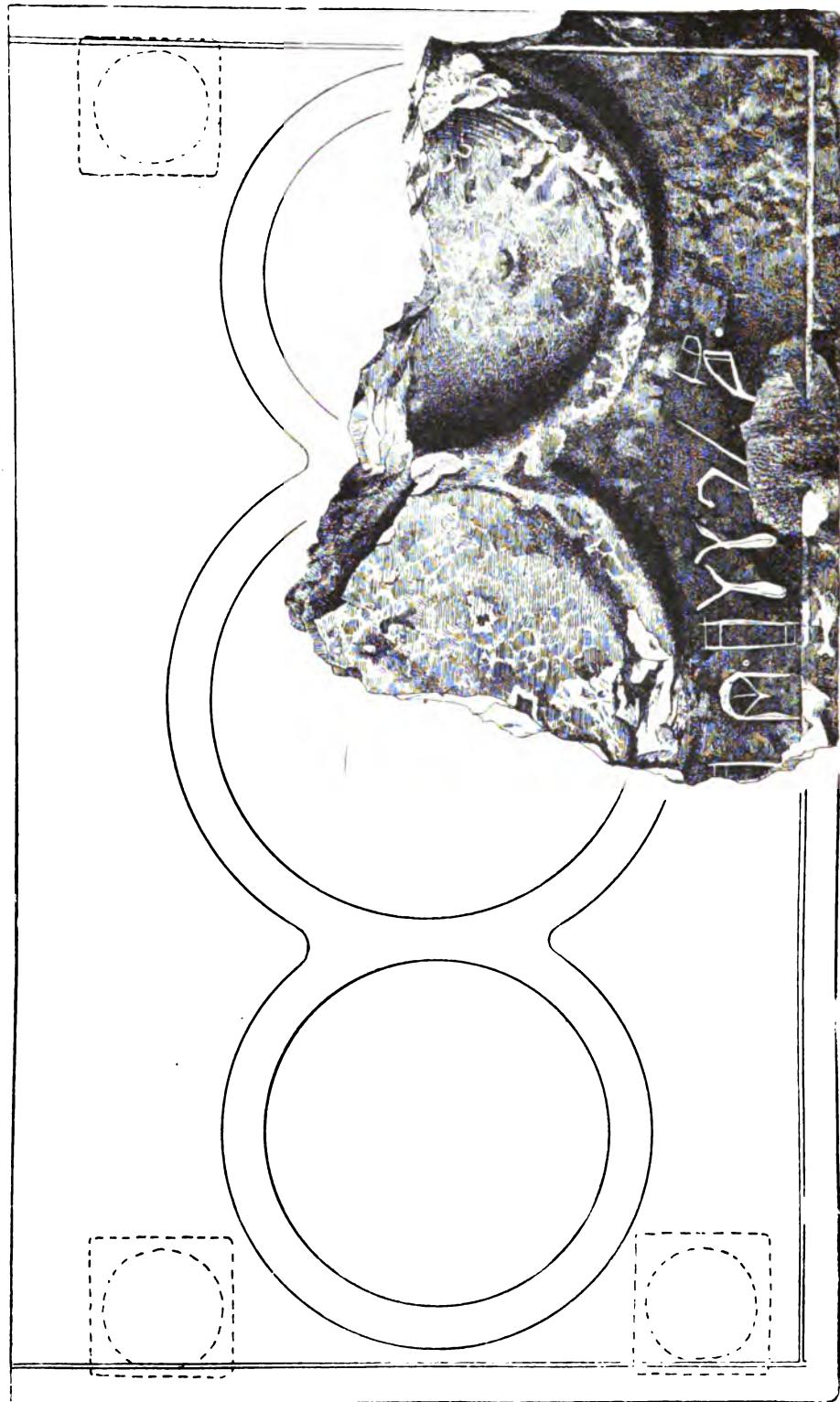


FIG. 25a.—INSCRIBED LIBATION TABLE FROM THE DICTAEAN CAVE. [a].
(Upper face, restored in outline.)



FIG. 256.—FRONT VIEW OF LIBATION TABLE FROM DICTAEAN CAVE. [ii].
(Restored in outline.)

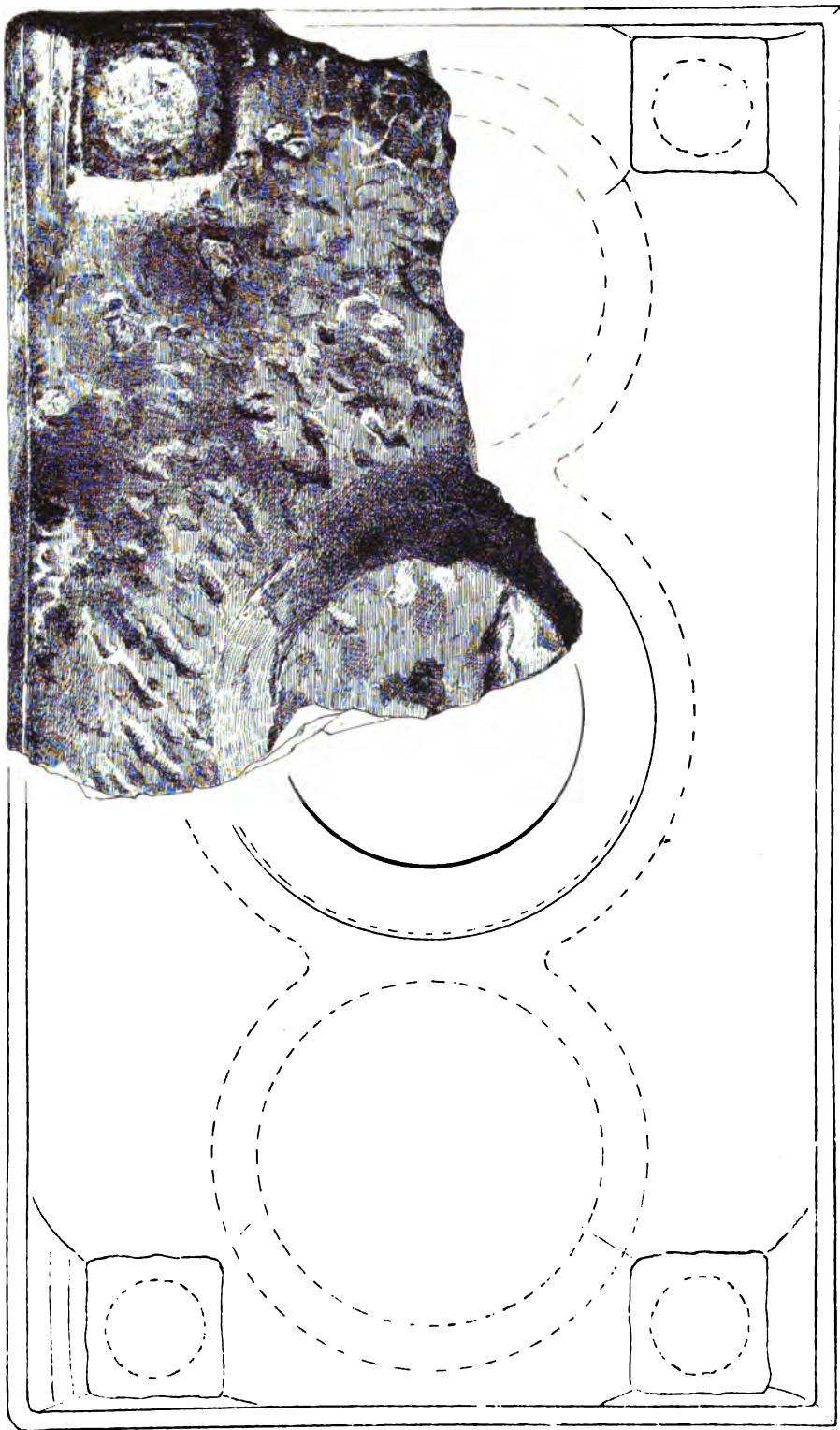


FIG. 25c.—UNDER-SIDE OF LIBATION TABLE FROM DICTAEAN CAVE. [3].
(Restored in outline.)

round down to the rock which in most places lay somewhat over two metres below the surface. No trace of the remaining portion of the stone was to be found, but about $1\frac{1}{2}$ metres down, we found a continuous layer containing what appeared to be a sacrificial deposit of bones, horns and ceramic objects, imbedded in ashes and charcoal. The bones were of deer, oxen, and goats, the horn of an agrimi or wild goat found in this stratum being about a foot and a half in length. Amongst the ceramic relics was a small clay figure of an ox of a rude character, common among the late Mycenaean remains of Crete, and of which a small deposit had been found in the same ash-layer nearer the inner wall of the cave. There was also the head of

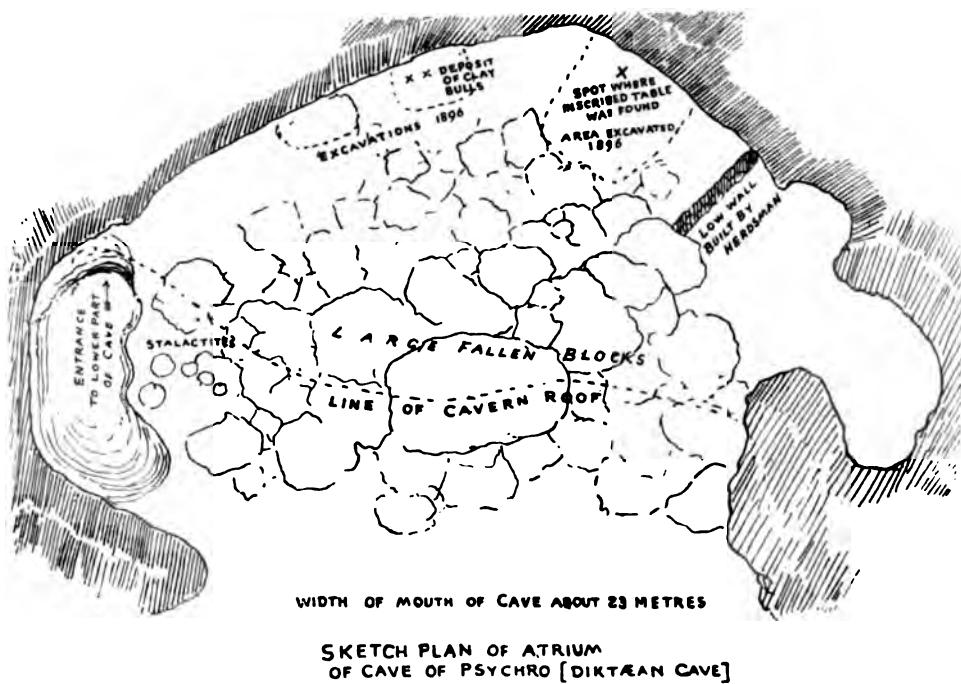


FIG. 26.

another ox of superior fabric, and fragments of two rough clay pipkins with flat bottoms, and handles sticking out like projecting fingers of clay. But the most characteristic vessels were small cups of plain reddish clay of a type found in the votive deposit in the Idaean Cave and in Cretan beehive tombs of the Mycenaean period. Of these I extracted over a score and almost all without a break, some arranged in 'nests' inside one another, a circumstance which sufficiently demonstrates that the stratum in which they lay had remained undisturbed since the time of their deposit. Two bronze oxen of rude fabric also occurred in the same layer.

The fact that the remaining part of the steatite libation-table was found

beneath this well-defined sacrificial stratum is of considerable chronological importance. This becomes the more evident when we come to survey the votive deposits of the Psychro Cave taken as a whole. Remains of the historic period are curiously rare. I was able to observe a plain proto-Corinthian *aryballos* and one or two fragments of glazed black Hellenic ware in a superficial layer, and, in 1895, was shown a terra-cotta griffin's head apparently from a tripod bowl, and a small trunk-like block of white marble with a tail of a snake coiled round it, belonging to a later cult, whether of Asklepios or of some local hero it is difficult to say. I further obtained a very remarkable bronze openwork figure of a huntsman carrying a wild-goat, analogous, though in a superior style, to that referred to by Milchhofer,¹ and now in the Louvre, representing two huntsmen with a similar animal. A few specimens of Cretan geometrical ware contemporaneous with that of the 'Dipylon' period in Greece also occurred and a fibula² with coils in its bow and a small square catch-plate, showing similar affinities.

But the great bulk of the relics found in the Diktaean Cave go back to the prehistoric period—and a large proportion of these may be described as 'Late Mycenaean.' A characteristic sword handle of that period found here (also common to Southern Italy) greatly resembled types represented in the bronze hoards discovered in the later houses of Mycenae. Certain double-axes, knives, adzes, and dagger-blades from the Psychro deposit bear the same affinities, while the bronze knives with slightly curving blades³ also occur in Mycenaean tholos tombs of the island and as imported objects in the later Italian *Terremare*. The coarser bronze figurines of men and animals approach those of the earliest deposits of Olympia, and of the Italo-Hallstatt Province, while other specimens obtained by me show a purer Mycenaean spirit. Amongst these may be enumerated flounced female figures and a small statuette of a man wearing the Mycenaean loin-cloth and showing a method of knotting the hair and two long locks behind very similar to that seen in the case of the men on the Vapheio gold cups.

Nor were there wanting relics of a still earlier period. Among these may be mentioned a fragment of a large dark brown vase with a goat rudely moulded in high relief, recalling some Cypriote ceramic products of the Copper and early Bronze Age. A small bronze dagger of quasi-triangular form, and short swords of very simple fabric seemed also to be distinctly *prae-Mycenaean* in character. A broken basin of dark steatite,⁴ somewhat heavily made, also probably belongs to the same early period. The fact that the fragment of the inscribed table lay below a well defined and apparently undisturbed sacrificial layer of Mycenaean date makes it possible so far as the actual conditions of its discovery are concerned, that it too may belong to the earlier cultural stratum represented in the Psychro relics. The

¹ *Anfänge der Kunst* p. 169 Fig. 65.

² Halbherr and Orsi, *Antro di Zeus, &c.*, I Tav. xiii. 6.

³ Compare for example Halbherr and Orsi, *op. cit.* I v. xiii. 8. Other specimens

obtained by myself are in the Ashmolean Museum. A similar knife was procured by me from a tholos tomb at Kamares on the southern slopes of Mt. Ida.

⁴ 'Pictographs' &c. p. 122, Fig. 121.

character of the libation-table itself is at least not inconsistent with such a possibility. To judge by the abundance of small terracotta cups, it looks as if the later votaries of the cave preferred to set their libations in these more portable receptacles.

The use, indeed, of steatite vessels, certainly survived in Crete into Mycenacan times, but, as I have elsewhere shown, the most flourishing period of the fabric of such objects in the island goes back to the time when ceramic arts had been less perfected. A series of examples demonstrates the fact that at a very early period Egyptian vases in hard stone were imitated by Cretan artificers in their native steatite, and the absolute correspondence with some Twelfth Dynasty models, including the imitation of the returning spiral ornament then rife,¹ shows that many of these Cretan stone vessels go back to the first half of the Third Millennium before our era. A special centre of the discovery of these early steatite vases is Arvi, a very ancient sanctuary of Zeus on the southern coast, and here examples were found in a tomb containing a clay suspension vase of early Aegean bucchero belonging to the period of the cist-graves of Amorgos or even of the Second City of Troy. Curiously enough, my recent journey led to the acquisition on this site, together with other vases of the same material, of an example of a steatite libation-table affording a very close parallel to that of the Diktaean Cave. It was of greyish hue, somewhat smaller than the other, and with only a single cup-shaped hollow, as before, with a raised rim. It had four short feet, but no central stem. This relic, at the time of my visit, had recently come to light at a knoll called Tartari, a little below the monastery which still keeps up the sanctity of the spot.

The early associations of other stone vases from this site and its neighbourhood, in which the imitation of Egyptian old empire models is clearly discernible, make the general correspondence of the libation-tables from Arvi and Psychro with Egyptian prototypes of early date the more suggestive. The characteristic features of the whole, the small portable table with cup-shaped hollows having their rim raised above the flat surface of the table, are here faithfully reproduced. It further appears that stone libation-tables of this kind were specially in vogue during the Twelfth Dynasty, and it is to that period that their imitation in Crete must remount. Professor Sayce informs me that a Twelfth Dynasty libation-table, which in form is simply an enlarged repetition of that from the Diktaean Cave, was discovered last year at Lisht by Messrs. Gautier and Jéquier and is now in the Gizeh Museum.

In the case of the libation table from Arvi the small groove which follows the upper surface of the slab near the margin is only continued

¹ The returning-spiral ornament in Twelfth Dynasty Egypt was not confined to scarabs. A dark *bucchero* vase found in Egypt, of a type characteristic of that and the succeeding Thirteenth Dynasty is surrounded by a decoration of this kind inlaid with white gypsum. The returning-spiral ornament recurs on a Cretan steatite vase, resembling a Twelfth Dynasty

type in hard stone, and with a similar cover, now in the collection of Dr. Julius Naue at Munich. It is also found on Egyptian cylinders and is imitated on primitive Aegean examples from Amorgos. The imitation of similar ornament on similar objects is a strong proof of the common origin of both.

round three sides. The fact that it is omitted on the fourth side seems to show that it was here set back against some other object. A groove in a similar position is observable on the remaining portion of the Diktaean Table; and in the restoration indicated in Fig. 25a it, too, has, on the analogy of the Arvi example, been omitted on the back side. It is probable that the Diktaean Libation Table was also set back against a flat surface, perhaps in this case the wall of the cave itself, close to which it was found.

The threefold receptacle of the Diktaean Table suggests some interesting analogies with a ritual usage which goes back to the earliest religious stratum of Greece. In the case of such primitive worship as that of the Shades of the Departed, and again in that of the Nymphs, a triple libation was frequently offered. According to the old Arcadian rite (specially significant in a Cretan connexion,) recorded in the *Odyssey*, the offering to the Dead before the Falls of Styx was of this kind¹:

Πρῶτα μελικρήτῳ, μετέπειτα δὲ ἡδεῖ οἶνῳ
Τὸ τρίτον αὐθ' ὕδατι.

The heroic and chthonic character of the primitive Zeus-worship of Crete makes it probable that a similar usage may here also have obtained, and in the very cave where according to the legend the infant Zeus has been fed by the Nymphs with 'mingled milk and honey,'² the offering of the μελικρήτα would have been specially appropriate. We are, indeed expressly told that the ritual performed in honour of the Cretan Zeus set forth the miraculous preservation of the infant and his nourishment by Amalthea and Melissa.³

§ 9. *The Inscription.*

It is time however to turn to the inscription itself. If the position of the punctuations can be taken as a guide, the characters run from left to right. It is possible, however, that, as in the later Libyan alphabets,⁴ these full-stop-like marks had themselves the value of letters.

The first character, though imperfectly preserved, is obviously the same as No. 3, and presents an elongated variety of what I have called the four-barred gate symbol. This occurs both on the linear and the pictographic series. As connected with a linear group it appears on an early white steatite seal-stone from Praesos, 'Pictographs,' etc., Fig. 36d, p. 28 [296]. On the pictographic series it is twice coupled with the bent leg, and, as already noted above, it is linked on the linear group referred to with a 7-like sign which may well be the linearised equivalent of the leg symbol. The 'door' or 'gate' symbol has already been compared with the Boeotian Φ with four parallel bars,⁵ which points in turn to an older form of the Semitic *Cheth* with four bars instead of three. (See Table I.)

¹ *Od.* x. 519, 520.

² Cf. *Diod.* v. 70.

³ Lactantius, *De falsa Religione*, 21, 22.

⁴ See below p. 386.

⁵ 'Pictographs' &c. p. 92 [*J.H.S.* xiv. p. 261] and cf. Table III. No. 3 p. 95 [*J.H.S.* xiv. p. 365].

The second sign is altogether new. The Ψ contained in it reminds us of Pictograph No. 54 and allied linear forms, but its combination with the arch suggests a comparison with the Egyptian hieroglyph representing a vault of a roof supported by a column,¹—especially the first example given in my comparative Table (I.) in which the capital of the column has a threefold division.

Among the meanings given for the Egyptian sign are hall, (*seh*), assembly, or festival (*hb*); to meditate or consider (*ua-ua*), science, wisdom, and incense (*sent*).

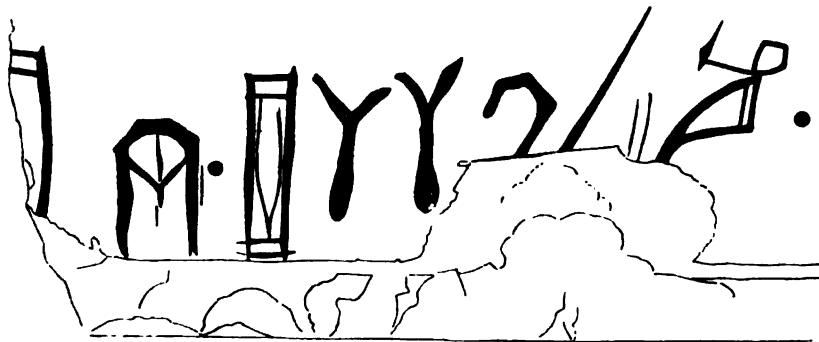


FIG. 27.—INSCRIPTION ON DIKTAEAN LIBATION TABLE.

The fourth and fifth signs are identical with that referred to above as the 'polyp' symbol, common among the Cretan pictographic signs and also apparently seen in a slightly variant form on the early linear seal, Fig. 22, above. (See Table I.) The reduplication of this character finds a parallel on a seal of the conventionalised pictographic class, *Pictographs*, etc., p. 30 (*J.H.S.* xiv. p. 299), Fig. 39, where it appears at the end of one line and the beginning of another.

The sixth sign must certainly be completed as \mathcal{Z} . This form occurs in the conventionalised pictographic series (*Pictographs*, No. 69, and cf. 70, 78), being found once more on line 4 of the four-sided seal described above (Fig. 6d). I have already compared it with the Egyptian hieroglyph \mathcal{Z} a coil of thread, signifying 'to reel.' In the Cypro-Egyptian syllabary \mathcal{Z} = *pe*. (See Table I.)

The seventh character is too imperfect to admit of probable restoration.

The remaining portion of the eighth letter is curiously grouped with the last of the series. It looks like the upper part of the Semitic *Resh*. The ninth character, which lies apparently on its back above the preceding, has a greater affinity with a *Beth*.

In the present state of our enquiry it would not be safe to go beyond general comparisons. Nor shall I, at least, attempt an interpretation which

¹ No. 1 is taken from Birch's edition of Bunsen *Egypt's Place in Universal History* Vol. 1 p. 541 No. 578 and cf. p. 542 No. 582. No. 2 is from De Rougé *Chrestomathie Égyptienne* Pl. xiii. 36 p. 105.

could hardly fail to be premature. The great value of the present group of characters consists in the fact that it is impossible to doubt that we have

TABLE I.

here to do with a formal inscription. For the first time we have to deal with a series of signs of alphabetical form,—though probably in part at least of

syllabic force,—not merely of a personal nature like those engraved on seals or scratched on vases, but, as far as can be gathered from their association, in the strictest sense of the word monumental. These letters, clearly cut and accompanied even by what has the appearance of a regular punctuation, on a stone Table of Offerings, brought to light in the earliest stratum of a sanctuary of remote antiquity, must in all probability be regarded as part of a formal dedication.

The correspondence observable with known symbols of the early Cretan script, both linear and pictographic, shows that the present inscription belongs to the same series as those of the seals and vases. But the inscription itself must on the whole be classed with the more linear group, and the balance of evidence shows that the linear type of writing in Crete belongs in the main to what may be called the 'Early Soft-Stone Period' of seal-engraving, which preceded the Mycenaean Age when harder materials like cornelian and chalcedony were successfully attacked.

In the three instances that I was able to cite in my former work in which characters of this linear class appear on three- or four-sided bead seals, they are all of the 'soft-stone' class, and all display ornaments or figures similar to those of the most archaic type of pictographic seals, in the decorative designs of which Twelfth Dynasty models are clearly traceable. The three-sided stone given there in Fig. 36 with rude linear signs and figures, certainly stands near the beginning of its class, and the inscribed whorl found in the Hagios Onuphrios deposit, engraved in the same primitive manner, also belongs, as the associated relics show, to the same early period. Of the examples cited in the course of the present paper, the rude steatite seal from Kalamafka has every appearance of primitive workmanship, and the inscribed vase from Cerigo has already been referred to the *prae*-Mycenaean period of Aegean culture.

On the other hand, the comparisons instituted between certain characters on the libation table, with some of those of the conventionalised pictographic class, such as the 'polyp' sign, the four-barred gate, and the ζ seem to bring down its date to a period approaching that of this later class which has proved Mycenaean affinities. This might take us to the beginning of the Second Millennium B.C., a date which would be still reconcileable with the fact that the Table itself is apparently based on a somewhat earlier Egyptian model. The converging lines of chronological induction at our disposal make it on the whole unsafe to attribute this monument to a later time.

If, as would thus appear probable, this monument goes back to about 2000 B.C. the antiquity of the *prae*-Phœnician system of writing in Crete receives a new and remarkable illustration. Brief and incomplete as it is, the Psychro inscription stands alone among the written records of our Continent. It is not only separated *longo intervallo* from the most ancient examples of Greek writing, but it distances by at least a thousand years the earliest specimens of the Semitic alphabet as seen on the Baal Lebanon bowls and the Moabite stone.

PART II.—PROTO-EGYPTIAN AND LIBYAN COMPARISONS.

§ 1. *Early Prism-seal of Steatite from Karnak.*

In connexion with the Early Cretan remains described in the preceding sections I am able to cite a remarkable piece of evidence pointing to the existence in the Nile Valley or its borderlands at a very early Pharaonic date, if not of actual settlers from Crete, at any rate of a 'Libyan' population closely allied to the primitive Cretans in the most distinctive property of early culture. This is a triangular bead-seal of black steatite (Fig. 28) obtained some years since, with other small relics from Karnak, by the late Mr. Greville Chester, and presented by him to the Ashmolean Museum. Though somewhat larger in size, it reproduces the characteristic form of the triangular Cretan bead-seals as well as the material of their earliest class.

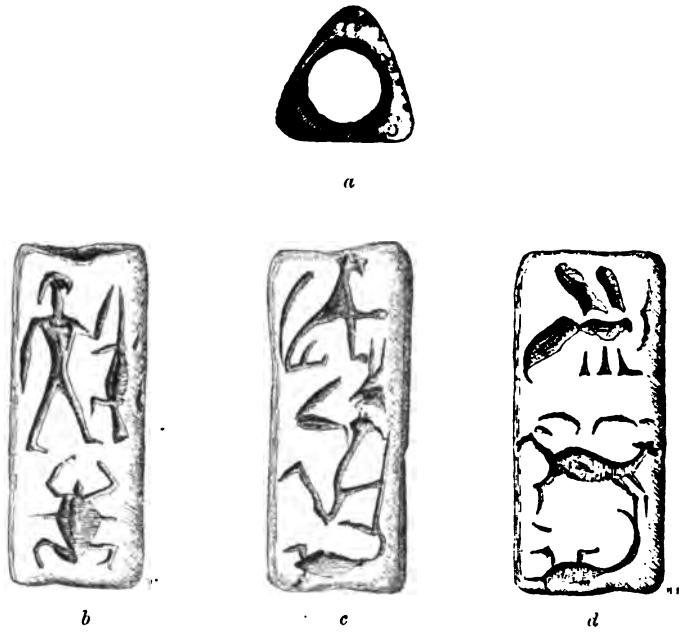


FIG. 28.—PRISM-SEAL OF BLACK STEATITE FROM KARNAK. [3].
a, section : b, c, d sides.

Among the signs which appear on the three sides, the bee or hornet, the scorpion with upturned tail (twice repeated), and the beetle, are common to the Egyptian hieroglyphic series, the others are variant or foreign forms.

As so often on the early Cretan seals we have at the head of what may

be taken to be the initial column, a rude human figure—in this case standing and apparently holding up a crocodile by its tail. In the next column is a seated animal with uplifted paw. Beneath this is a figure in a violent attitude, as if in the act of running. The body and limbs are those of a man, but the head, which is turned back, is that of an animal. It has two long slightly curving horns as of some kind of goat or ox. On the third face of the seal appears another monstrous form—the linked forequarters of a pair of ibexes.

The form of the Cretan prism-seals had suggested to me from the first a certain parallelism with the oriental cylinders. I went, indeed, so far as to observe that they might in some sort be described as 'three-sided cylinders.' That these trilateral seals are in Crete itself the direct descendants of the rude perforated splinters of steatite which characterise the most primitive stage of the glyptic art in the island is a natural supposition.¹ But the elongated type with large central perforation² shows such an approximation to the cylinder that some influence from that type of signet might reasonably be suspected. The rude irregular form of the original bored splinter has been as it were crystallised into a geometrical shape in conformity with the early Egyptian and Oriental cylinder-seal. In Crete itself, however, there seems to have been no sufficient opportunity for such influence. Rude and distant imitations of the early cylinder type have indeed been found at Hissarlik and in Amorgos, but not a single specimen of the primitive cylinder has as yet been discovered in Crete.

The occurrence, however, of the prism-type of bead-seal in Egypt suggests that the more primitive 'wedge-seal' may have been modified by the cylinder type on Egyptian soil itself by a population having both an Aegean and a Nilotc range. For we now know that the earliest form of signet among the dynastic Egyptians themselves was not the scarab but the cylinder. The remarkable royal tombs, explored by M. Amélineau at Abydos, and by M. de Morgan at Naqada, though they contained not a single scarab, produced a series of clay cones used as stoppers of vases, exhibiting impressions from cylinders. The crowning discovery of Dr. Borchardt, who has identified the royal tomb excavated by M. de Morgan at Naqada with that of the first Egyptian monarch, shows that the signet of Menes himself was a cylinder.

Some of the cylinders of this earliest dynastic period have been actually preserved to us. On one of white stone in the Ashmolean Museum Professor Sayce has recently deciphered the name of Atota, a grandson of Menes, while on another of green steatite, found in an early tomb excavated by Mr. Quibell at El Kab, he has recognised the name of King Khaires of the Second Dynasty. Some of these early cylinders are of copper,³ and it is perhaps owing to the influence of this type that from about the Fourth to the Sixth

¹ See above, p. 330.

² A good example of this Cretan type with abnormally large perforation is seen in *Pictographs, &c.*, Fig. 36, p. 28 [297]. This seal, with linear characters, belongs to a very early

class.

³ A specimen of this class, also from a tomb, excavated by Mr. Quibell at El Kab, and now in the Ashmolean Museum, apparently bears the name of Men-Kau-ra of the Fourth Dynasty.

Dynasty the stone cylinders show an abnormally large perforation. In the time of the Twelfth Dynasty an ivory tube was inserted into this perforation, and shortly after that period the cylinder type of signet in Egypt was finally

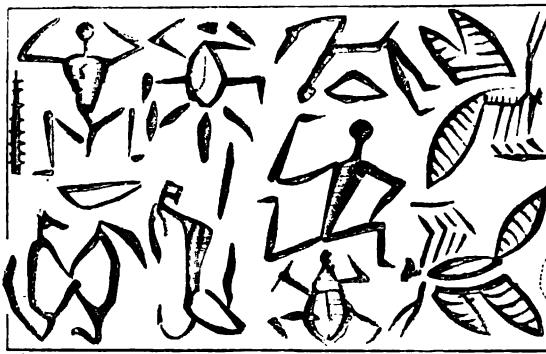


FIG. 29.—CYLINDER OF BLACK STEATITE, PETRIE COLLECTION.

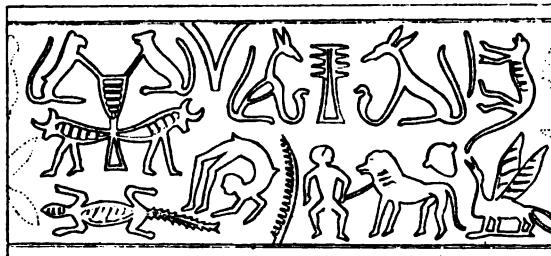


FIG. 30.—CYLINDER FROM LAJARD (CULTE DE MITHRA).

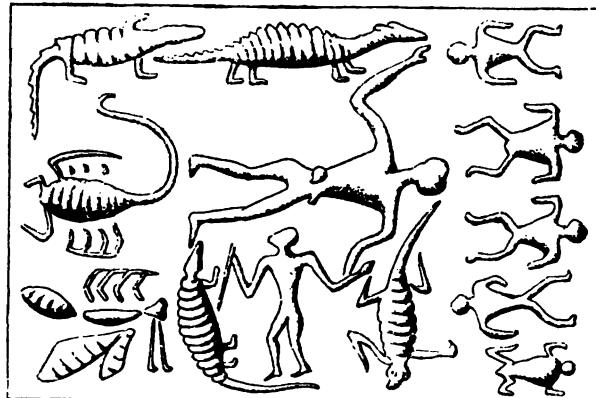


FIG. 31.—CLAY CYLINDER IN GIZEH MUSEUM. AFTER DE MORGAN.

superseded by the scarab, a form apparently unknown under the earliest dynasties.

The Egyptian cylinders above referred to are the true fabric of the

Pharaonic race and bear regular hieroglyphic inscriptions. But, side by side with these, from the earliest dynastic period, there existed another class of cylinders exhibiting signs of a more pictorial character, which, though containing Egyptian elements, are by no means of the orthodox Egyptian class. These cylinders seem for the most part to be formed of black steatite similar to that of the Karnak prism, and the figures with which they are engraved show most striking correspondences with those on this Cretan type of seal.

The closeness of this affinity will be sufficiently illustrated by the examples of this class of cylinder given in Figs. 29,¹ 30,² 31.³ The standing figure apparently holding up a crocodile by the tail on the first face of the prism receives a double illustration in Fig. 31. The running figure with a man's body and the head of a horned animal, Fig. 28c, repeats the movement of the running human figure on Fig. 29. If in the former case we have a kind of Minotaur, we find here the figure of a man with a hare's head. The scorpion with upturned tail reappears in Fig. 31, the beetle on Fig. 29, the bee on all three cylinders. The two-headed goat finds a close analogy in the linked forequarters of the oxen on Fig. 30, and further parallels in the double lion and lion-ibex of a cylinder impression from the tomb of Menes to be referred to below.

It is obvious that both prism and cylinder represent the same traditions and are of the same contemporary fabric. A closely-allied work is also to be seen in the impression of a cylinder on a clay cone found by M. de Morgan in the tomb of Menes at Naqada.⁴ The special group with which we are concerned seems, however, to belong to a somewhat later date, though containing very early traditions. From its exceptionally large perforation and certain peculiarities of technique, Professor Petrie inclines to refer the cylinder in his possession (Fig. 29), to the time of Pepi II., of the Sixth Dynasty, for whose reign he assigns the approximate dates, 3443—3348 B.C. The close resemblance observable between this and the Karnak seal both in the material, which is the same black steatite, the size of the perforation, and the character and style of the figures, shows that it must, approximately at least, be regarded as contemporary with the Petrie cylinder. It thus appears that—if we accept the chronology of Professor Petrie—the Karnak prism-seal was executed about 3400 B.C. and that the prototypes of the primitive Cretan class must go back to that remote epoch.

We can have no hesitation in dealing with the above cylinders and the Karnak prism as a homogeneous group, and the interesting question arises,—To what racial element does it belong? It represents, as we have seen, together with certain types common to the historic Egyptians, other forms of extraneous origin.

¹ This cylinder is in Professor Petrie's collection, to whose kind permission the present reproduction is due. It is of black steatite, with an exceptionally large perforation.

² From Lajard, *Culte de Mithra*, Pl. xlvi. 8.

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³ Clay cylinder in the Gizeh Museum, from De Morgan's *Recherches sur les Origines de l'Egypte* (ii.) Fig. 857, p. 257.

⁴ *Origines de l'Egypte* (ii.) Fig. 560, p. 169.

Among these is a curious bow-legged figure which occurs on all the examples of cylinders given above. On Fig. 29 we see it with both hands raised, on Fig. 30 leading a cynocephalus, on Fig. 31 it is four times repeated.

This figure is of great interest. The characteristic form of the lower limbs shows that we have in fact to deal with the same grotesque personage who so often makes his appearance in a secondary position on Babylonian cylinders.¹ Allied, and perhaps derivative, figures may be seen in the pygmy or 'embryonic' form of Ptah-Socharis-Osiris and its offshoot the Phoenician Pataecus,² but there can be no question that the type seen on these early cylinders is the direct reflection of that which appears at a very early date upon those of Chaldaea. The horned man of the Karnak prism may itself be due to a composite and distant reminiscence of Gilgames and Eabani.

The true cylinder types of dynastic Egypt, as we now know them from the First Dynasty onwards, show, from the first, purely normal representations of contemporary hieroglyphic forms. They reproduce a system of signs already fully evolved by at least as early a date as the time of Menes. Though the cylinder form itself is oriental, and though some few hieroglyphs may go back to the same common origin as the Chaldaean, there is no sign of direct borrowing of Asiatic types. On the group, however, with which we are immediately concerned, we are here confronted with a figure taken direct from the cylinders of Babylonia. In the naked male figure, indeed, between two crocodiles on Fig. 31, we find the actual adaptation of a familiar Babylonian scheme—the hero between two bulls or lions, sometimes held in a reverse position.

We see thus upon the present series evidence of borrowing both from Asiatic and dynastic Egyptian sources—the latter naturally preponderating,—while at the same time both classes of borrowed elements are reproduced with a certain barbaric fantasy, and combined with other features which are neither Pharaonic nor Chaldaean.

To what Nilotic population, then, are these hybrid works to be ascribed? The answer to this inquiry will probably be found in the evidence supplied from other quarters of the partial survival in the Nile Valley of the earlier

¹ It appears in diminutive dimensions in the inter-spaces between the principal figures on a series of Babylonian cylinders. At times it is associated with the small image of a nude female divinity, apparently Sala, a form of Istar. (Menant, *Collection De Clercq*, Pl. xxiii. 231, Pl. xxvii. 277; Lajard, *Culte de Mithra*, Pl. xxxix. 5, Pl. xl. 9). For Sala, see Nikolsky, *Rev. Arch.* 1891, ii. p. 41, who cites a cylinder on which this name accompanies the nude female type. In this case Sala-Istar is coupled with a nude male divinity, also of diminutive size, and identified by the inscription with Ramānu, the Syrian Rimmon. The arms of this male figure, crossed on the breast, resemble those of the prevalent Chaldean version of the type with which

we are dealing, but the legs in this case are not bow-legged. The fact however that the bow-legged type is repeatedly associated with the nude Goddess, and like it occasionally appears on a kind of base of the same form, makes it probable that the diminutive and grotesque male figure was regarded as a satellite of the small female figure. This male figure occurs on cylinders of extremely archaic type (cf. especially Lajard, *Culte de Mithra*, Pl. xl. 9). Above it is not unfrequently seen the combined symbol of Sin and Samas, and sometimes a crescent or a star. (Menant, *Coll. De Clercq*, Pl. xiv. 123).

² A parallel but variant type is seen in Bes.

indigenous stock which was in possession of the land at the time of the first coming of the Pharaonic conquerors from the South-East. This earlier population, of which something more will be said in the succeeding pages, has been with great probability identified by Professor Wiedemann and others with the ancient Libyan race. In a large number of the tombs excavated at Naqada and elsewhere, we must, in view of the most recent discoveries, recognise the remains of this pre-historic race in Egypt.

To a certain extent the whole later civilisation of historic Egypt was influenced by this pre-existing indigenous element, the assimilation of which was only the work of centuries. In the case of the present group of cylinders, the traces of the traditional 'Libyan' art seem to be especially strong. The form of the human figures may be compared with the rude sketches on some of the prehistoric pots of Naqada.¹ The scorpions with upturned tails, the crocodiles, the ibexes, the long-legged birds, probably ostriches,² are all plentifully represented. The semi-processional arrangement of the animals on the cylinder impression from the tomb of Menes recalls the zones of animals on the prehistoric ivory handle from Sohaj,³ and the gold-plated knife in the Gizeh Museum.⁴ A further parallel is afforded by the two-headed animals of the cylinders and prism-seal. These combinations recall one of the special features of this proto-Egyptian art, as illustrated by the slate palettes and ivory combs, which repeatedly take the shape of double birds⁵ and, at times, of ibexes.⁶ On a proto-Egyptian slate tablet⁷ a double bull is seen in association with bow-men whose hair, divided into separate plaits and adorned with two plumes, recalls later, Libyan, fashions.

These comparisons seem to show that the class of cylinders with which we are at present concerned, and with them the Karnak cylinder, were the work of some more or less independent Libyan elements which still survived in the Nile Valley, or had perhaps partially re-intruded themselves there, as late as the Sixth Dynasty. The traces of Asiatic influence, such as the Pataecus-like figure on these signets, point to a race who had intimate relations with the traditional enemies of the Pharaohs on the Syrian side.

If this conclusion is correct, and we have here the handiwork of a Libyan population, the prism seal of Karnak, though as yet an isolated phenomenon, may prove to be of capital importance in its relation to the early bead-seals of Crete, and in a more general sense to the origin of the primitive Cretan and Aegean culture. For, as will be seen from the comparisons given below, the points of resemblance are by no means confined to the three-sided form of the seal itself. Taking this and the allied

¹ Compare the vases, Petrie, *Naqada* Pl. xxxv. 7 and De Morgan, *Origines de l'Egypte* i. Pl. iii. 4a.

² Cf. the cylinder impression from the tomb of Menes, De Morgan, *Origines de l'Egypte*, ii. Fig. 560, p. 169, where a similar long-legged bird occurs.

³ Petrie, *Naqada*, Pl. lxxviii. In the Pitt Rivers collection.

⁴ De Morgan, *Origines, &c.*, i. p. 115, Fig. 136, and ii. Pl. v.

⁵ Cf. Petrie, *op. cit.* Pl. xlix. Fig. 62 *seqq.*

⁶ *Ib.* Pl. xlvi. Fig. 11.

⁷ In the British Museum No. 27090.

cylinders as a homogeneous group, a whole series of interesting and conclusive parallels can be established between the figures that they contain and certain distinctive types of the primitive Cretan cycle. This correspondence, moreover, extends to some of the characteristic designs on gems of the Mycenaean period.

The bird, probably an ostrich, that occurs among the animals on the impression of a cylinder of the indigenous class found in the tomb of Menes seems to be the forerunner of the long-legged race seen on the Cretan bead-seals. In the one series we find the ibex, in the other the wild goat. The scorpion with upturned tail, which is seen already on the prehistoric pottery of Egypt, and is so characteristic a feature on the Karnak prism and the allied group of cylinders, is also one of the most frequently represented objects on the early three-sided steatite seals from Crete. The spider on the Petrie cylinder is of special interest in view of the fact, that while on the one hand it is unknown amongst Egyptian and Chaldean representations, it is now seen to take a prominent place among the Cretan pictographs.

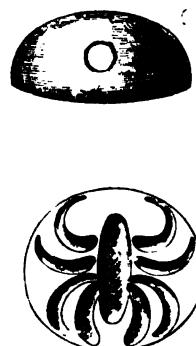
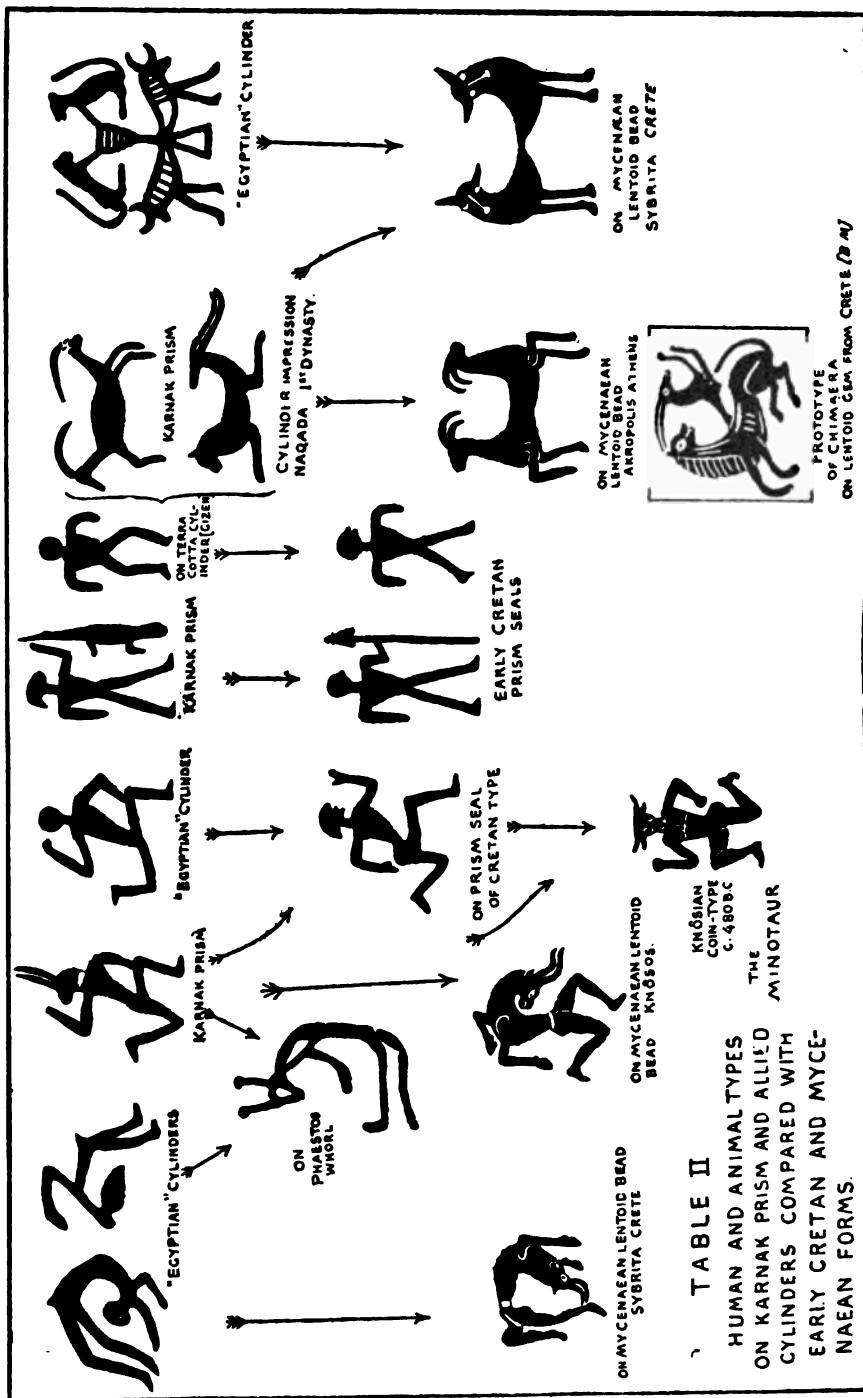


FIG. 32.—ANCIENT LIBYAN BEAD-SEAL OF STEATITE FROM NEAR CONSTANTINE (CIRTA).

But the spider itself as a symbol on ancient signets also appears in an undoubtedly Libyan connexion. In the collection of antiquities formed by Captain Farge, Director of the Bureau Arabe at Constantine, the ancient Cirta, once the capital of the Numidian kings, I observed a bead-seal of brown steatite found near that place, a sketch of which, made with the owner's kind permission, is reproduced in Fig. 32. It represents a spider of the Tarantula class, not unlike that on the early cylinder, and the bead-seal on which this object appears seems, both from its form and material, to belong to a relatively early date. This hemispherical type of bead-seal belongs in Greece to the Geometrical Period and to the ninth and tenth centuries B.C.¹

On Table II. will be seen a further series of comparisons between certain characteristic schemes and subjects of the 'Egypto-Libyan' group—if such

¹ Examples of this form have been found at Olympia. Cf. Furtwängler, *Olympia*, p. 188, and *Beschreibung der geschnittenen Steine im Antiquarium* (Berlin), No. 70. Similar types of bead-seal have been found on the site of the Heraion at Argos and in Anatolia.



a term be allowable—and others on the primitive seals of Crete and on some Mycenaean gems. It will be noticed that the rude square-shouldered human figure that occupies the first column of the Karnak prism-seal shows a great family likeness to the primitive figures which stand in the same position on the analogous class of Cretan signets. The figures with bowed arms, seen on the cylinder, Fig. 31, correspond with another Cretan type. The running figure on the Petrie cylinder, the scheme of which is repeated by the horned man on the Karnak prism, bears a striking resemblance to that on the steatite bead-seal of Cretan type published in my former work on the Pictographs.¹

The contorted schemes illustrated by the hare-headed human figure on Fig. 29, and still more by the tumbler on Fig. 30, also find analogies among the Cretan designs. A certain common element may be detected between the first-mentioned and the attitude of the rude horned man on the Phaestos whorl. The tumbler—which except that on the cylinder he is seen naked, corresponds with an Egyptian ideograph²—presents a design admirably fitted for the circular field of the lentoid class of gems. If we may be allowed to assume—in the absence of direct evidence—that the tradition of this type was perpetuated through the intervening period by 'Egypto-Libyan' art, we should be able to trace to this source a scheme applied by the Mycenaean engravers of Crete to representations of the Minotaur. The close conformity of arrangement will be seen by a glance at the annexed diagram.

But the most interesting of all the parallels supplied by the Karnak prism is the first appearance of the 'Minotaur' itself. The type of the horned human figure, though in a different pose, is seen on one of the earliest examples of Cretan engraving, the whorl, namely, from the prehistoric deposit of Hagios Onuphrios, near the site of Phaestos. In Mycenaean Crete the type is frequent, but in this case it is of different composition. We no longer see a human body and bull's head, but the whole forequarters from the waist up are here bovine. It is in fact one of a parallel series of Cretan representations of this period, in which the lower part of a man is coupled with the upper part of a wild goat,³ or a lion, or a flounced female figure terminates above in a flying eagle.⁴ In Greek art, as is well known, the monster reappears with human arms and body and only the head of a bull.

So far as the horned man is concerned it looks as if through all these corporeal variations we had still to do with essentially the same fabulous form, and the later Cretan version as seen on the coins of Knōsos may thus

¹ Fig. 53.

² *χτι*=to tumble.

³ On the Cretan lentoid gem in the British Museum (Cat. No. 76, Pl. A.) published by Milchhöfer (*Anfänge der Kunst*, p. 78, Fig. 50) the foreparts of a goat and bull are both attached to the lower part of a man. Separate figures of a goat-man and a lion-man are in my own collection. Milchhöfer himself (*loc. cit.*) expresses his opinion that the Minotaur type

did not originate from a mere arbitrary conjunction of this kind, due to the caprice of an engraver, or, as in the case of the Chimaera, to a misunderstanding of gem perspective by later copyists. The antiquity of the horned man type in Crete seems also to show that the Mycenaean engravers in this case simply gave a new expression to an already existing idea.

⁴ On some unpublished gems from Crete.

be regarded as a reversion to the type which precedes the Mycenaean. Whether the whole myth is of iconographic origin or with what oriental elements it possibly connects itself, need not be discussed here. But if the connexion between the primitive type of the Karnak cylinder and the insular examples holds good, we may here have caught a glimpse of the Minotaur on his way to Crete as early as the fourth Millennium before our era.

Another interesting point of agreement between the early prism and cylinders from Egypt and the Mycenaean cycle is supplied by the two-headed animals. The conformity with the two-headed terminations of the prehistoric slate palettes of Naqada and the double bull on the proto-Egyptian tablet has already been noted. A certain analogy to these monstrous forms on the early cylinders of the non-Pharaonic inhabitants of the Nile Valley, is also supplied by the composite animal forms of the still earlier Chaldaean cylinders, due to the coalescing of two crossed animals. As a rule, however, these Chaldaean forms differ from the 'Egypto-Libyan' class, since in their case the upper part of a single body is attached to two hind-quarters.¹

The examples before us, on the contrary, show two fore-quarters united—in one case of two lions, in another of a lion and ibex, in a third of two goats or ibexes, while in the lower part of the more complicated design on Fig. 30 the forequarters of two bulls are seen to coalesce.

On the more primitive class of Cretan seals we find certain designs, such as that seen on Pl. X. No. 13, with two foreparts of animals in reversed position. A still closer analogy is shown by some Mycenaean types, of which two examples are given in Table II. The first is a double goat on a lentoid bead of dark steatite found on the Akropolis at Athens,² the other is a double ox on a similar bead of green serpentine from Sybrita in Crete³ curiously recalling that on the slate tablet referred to above. The existence of such animal ligatures⁴ may have assisted the evolution of the Chimaera from the misinterpreted perspective of the Mycenaean gem type, representing a goat behind the back of a lion.⁵ It is at any rate a remarkable coincidence that the coupling of the lion and the ibex should already occur on a primitive cylinder of the age of Menes.

The reappearance—*per saltum*—upon Mycenaean intaglios of the figures of conjoined animals that characterise these early cylinders and prisms, taken in connexion with the other correspondences already indicated, is a fact of great suggestiveness. We may well suspect that the missing links in the

¹ Compare the cylinder figured in Menant, *Glyptique Orientale*, vol. i. pp. 60, 61, Figs. 26, 27, 28. In Fig. 29 however the upper part of two coalesced goats terminates in two heads and forequarters. This type might form the starting-point for the 'Egypto-Libyan' form.

² Now in the Central Museum at Athens.

³ In my collection.

⁴ Double-headed animals as pendants or

ornaments are also frequent in the Late Bronze and Early Iron Age, perhaps spread through Mycenaean influences. (See especially S. Reinach, *Sculpture en Europe*, p. 113 *segg.*).

⁵ See Milchhöfer, *Anfänge der Kunst*, pp. 82, 83 and Fig. 53. The type is placed for comparison on Table II. Another lentoid bead of steatite with the same type was observed by me at Xero in Eastern Crete.

pedigree will eventually reveal themselves whenever the early archaeological strata of the Libyan borderlands of Egypt come to be investigated. The lentoid type of bead itself comes from the Egyptian side. It was fashionable in the days of the Twelfth Dynasty, and from the occurrence of this form among the relics from the royal tombs of Abydos it would appear to have been already in use in the days of the first Pharaohs.

§ 2. *Crete the Meeting-point of Thraco-Phrygian and Libyan Elements.*

It will be seen that the new evidence supplied by the Karnak prism and the inscribed Libation Table from the Diktaean Cave leads us in the same direction. In both cases we find the clearest indication of a very early connexion between Crete and the Nile Valley. In my account of the Hagios Onuphrios deposit, evidence has already been given that a form of Cretan stone vase shows a close correspondence with an Egyptian type belonging to the Fourth Dynasty. The Karnak prism indicates that as early as the Sixth Dynasty, and at a date which cannot be brought down much later than 3,500 B.C., the typical Cretan form of the seal was in use by a probably Libyan population in the Nile Valley. The Libation Table, on the other hand, brings home to us for the first time the fact that by the time of the Twelfth Dynasty the Cretans were so far affected by Egyptian influence as not only to have received—as we know from other evidence—a series of decorative motives from that source, but to have adopted, apparently for similar use, an article of Egyptian cult.

The imitation of the characteristic scarab decoration of that period on the Cretan seal-stones of the *prae-Mycenaean* class has, I venture to think, been proved to demonstration.¹ Such imitation, moreover, proves even more than the sporadic discovery of the Twelfth Dynasty scarabs themselves in the island, for primitive peoples are not antiquarian revivalists, and content themselves with copying the contemporary fashions of their more civilised neighbours.

But the occurrence of the inscribed Libation Table of Twelfth Dynasty type in the prehistoric stratum of a Cretan votive cave must be considered to indicate something more than the borrowing of external forms. The adoption, in this case, for indigenous purposes of cult, of the early Egyptian form of libation table shows truly an intimacy of religious contact for which the other evidences of Egyptian influence, striking as they are, could hardly prepare us. The phenomenon opens up whole vistas of new possibilities as to the primitive relations of Crete with the Nile Valley, and the conformity here brought to light is of such a kind as almost to necessitate the invocation of Libyan intermediaries. Such a degree of influence, not on the externals only of articles of use or ornament, but on a fundamental object of primitive cult, can hardly be due to mere mercantile relations. It points surely to the presence among the inhabitants of Crete of an element which

¹ To the comparative examples in *Pictographs, &c.*, p. 58 [327] Fig. 49, I can now add others equally cogent.

had experienced a prolonged land contact with Egypt—to an element astride the Libyan sea, with one foot on the AEGEAN island and the other on the African shore.

That the Libyans had largely imbibed the religious teachings of Egypt appears from a variety of indications. This is even shown by their personal names, in the composition of which are found the Egyptian appellations of the Sun- and Moon-Gods—Ra and Ah—and possibly of Isis and Hathor.¹ The opposite process is seen in the Egyptian adoption of the Libyan divinities Neit and Set.

The strong Egypto-Libyan ingredients in the primitive Cretan culture—pointing, as they do, to the possibility of early settlement from that side,—may some day indeed supply the clue to more than one characteristic feature in the insular religion and mythology. In my earlier communication stress has already been laid on the impossibility of explaining the deep-seated community between some of these and Semitic types by the comparatively late Phoenician contact. Such parallel appearances, for instance, as Minos and Moses—both divine legislators, receiving the law ‘mouth to mouth’ in repeated visits to the God of the Mountain,—point to very early derivation from a common source.

But the Libyan element was itself well qualified to supply certain links of connexion with the Semitic world as well as the Egyptian. Evidences of a religious contribution from this side, quite apart from that derived from the Phoenician settlements on the North African Coast, are indeed supplied by some of the indigenous Libyan inscriptions, which contain the names of three Nabataean divinities.² The early ‘Egypto-Libyan’ cylinders referred to in the preceding section show not only the influence of the oriental form of signet, but are accompanied by the Pataccus-like figure which on the Babylonian cylinders appears as the satellite of the nude figure of Salal-Istar, and apparently as a representative of the typically Syrian God, Ramānu or Rimmon. The direct relation in which these, *ex hypothesi*, Libyan signets stand to the Cretan prisms has been sufficiently illustrated; and we may therefore trace in them the further links of a chain of primitive intercourse with the Semitic world.

But over and above these archaeological evidences, it must be borne in mind that the Libyan dialects themselves, as illustrated by their surviving members in Algeria, Morocco, and Sahara, stand in a close relation to the Semitic family.³ In their grammar, and, to a certain extent, in their vocabulary,—and notably in such rudimentary elements as the numerals and

¹ Halévy, *Études berbères*, p. 122.

² Halévy, *loc. cit.*

³ For the modern Libyan languages see especially Venture de Paradis, *Dictionnaire berbère* and the *Dictionnaire français-berbère* (generally known as *Brosselard* from the name of one of its chief collaborators) Paris, 1844. A. Hanoteau, *Essai de Grammaire Kabyle* (Paris, 1858) and *Essai de Grammaire Tamachek* (Paris,

1860). Barth, *Travels in North and Central Africa*. v. 565 seqq. H. Stanhope Freeman, *Grammatical Sketch of the Temahug or Touarek Language*. (Ghat Dialect), (London, 1862). Prof. F. W. Newman, *Notes on the Libyan Languages*. (R. Asiat. Soc., July, 1880) *Libyan Vocabulary*, (London, 1882) and *Kabail Vocabulary* (London, 1887).

personal pronouns,—they show a decided affinity not only with Coptic and Amharic, but with Hebrew, Aramaic, and Assyrian. They are in fact sub-Semitic.¹

It must yet be borne in mind that from another point of view the early archaeological remains of Crete bring it like the other Aegean islands into close relation with the western coastlands of Asia Minor, the mainland of Greece, and even the Danubian basin. The marble 'idols' of the Cretan deposits, like that of Phaestos, belong to precisely the same class as that of the other Aegean islands and of the first and second cities of Troy. The primitive clay hanging vessels and the most rudimentary incised figures on Cretan whorls and seal-stones also find their nearest analogy in the earliest strata of Hissarlik. So, too—to turn to the remains of Mycenacan date—the *megaron* of the Cretan Goułas preserves with only slight modifications the ground-plan of the far earlier prototypes that occur in the second city of Ilios.² All this is quite in keeping with the well-marked group of early traditions and pre-Hellenic place-names implying the existence of a strong Phrygian element in the primitive population.³ Sufficient evidence of this connexion is supplied by names like Pergamon and Ida, and by many characteristic features of the Cretan religion in which the Mother Goddess Rhea, the Idaean Daktyls, the Kuretes and Korybantes with their orgiastic dances, all reappear.

While, therefore, we must admit the great infusion of Egypto-Libyan elements in primitive Cretan culture, we must at the same time never lose sight of that other side of its early traditions and remains which implies the presence here of members of the great Thraco-Phrygian race. If, as seems to be a natural conclusion from the intensive character of the Old Empire influence in the island, there were Libyan settlements here at a remote date, these may have either been gradually merged in an earlier population of European stock, or may have continued to coexist with it, just as at a later date Eteokretes, Dorians, Achaians, and Pelasgians lived side by side.

The evidence which makes Crete the meeting-place of Thraco-Phrygian and Egypto-Libyan elements fits in with a parallel series of indications supplied by ancient tradition and corroborated by Egyptian records. In these we see the 'Trojans' and their neighbours engaged at a very early date on the African side. The ease with which the Libyan princes during the Nineteenth Dynasty allied themselves with the maritime races of the Aegean shores reveals a very intimate connexion between the two, and the abiding tradition of the Maxyes,—perhaps the most civilised of the Libyan tribes,—that they were of Trojan origin,⁴ may point to some still recognised blood-relationship. So too the Trojan band of Antenor appear among the

¹ The expression is Prof. F. W. Newman's. Others, like Renan, have preferred to apply the term 'Hamitic'—a distinction, perhaps, without a difference.

² See my article, *Goułas, the City of Zeus* (Annual of the British School at Athens, 1895—

1896), p. 188.

³ Cf. Hoeck, *Kreta*, i. 109 *seqq.*, 143, 208 *seqq.*, &c., Milchhofer, *Anfänge der Kunst* 129.

⁴ Herodotus, iv. 191: φασὶ δὲ οὗτοι εἶναι τῶν ἐκ Τροίης ἀνθρώπων.

præ-Hellenic settlers in Cyrene,¹ reminding us of legends which made Teucèr land in Crete and *Æneas* found the Cretan Pergamon.² Elymos, the son of Anchises, the *Eponymos* of the Elymian inhabitants of Western Sicily,³ bears a name almost identical with that of a Libyan prince;⁴ his people themselves had touched on the Libyan coast⁵ before continuing their course to Lilybaeon⁶ and Eryx. *Æneas*, on the same Sicilian journey, tarries at Carthage, and his intercourse with Dido is the more important that we have here the female form of the most characteristic and at the same time the most ancient of Libyan personal names.⁷

Closely connected with these phenomena are some striking correspondences between the tribal and geographical names in the North African coastlands with those of the Greek and Thracio-Illyrian peninsula. The Numidian *Musk̄n̄oi* are very suggestive. The legend of the Argonauts brought Jason from Iolkos to the Triton's lake. The Maxyes of that very region claimed, as we have already seen, a 'Trojan' descent, and the names of other bordering tribes point clearly to European kinship. If there were Thessalian *Magn̄t̄es* in Crete, there were Dolopes beyond the land of the Lotus-Eaters, whose neighbours again, the Eropoei, have a Boeotian and Illyrian ring.⁸ The foundation sagas of Cyrene, in all their variant forms, show that the Greek settlers recognised a very close pre-existing connexion between Crete and the opposite Libyan coast. How far-reaching was the scope of early Cretan enterprise may be gathered from the fact that the traditions of 'Minoan' settlement extend from Gaza to the Sicilian Herakleia.

The first colonists from Thera have to find a pilot from the Eteocretan district, a purple-shell fisher, namely, of Itanos,⁹ whose legendary name, Korobios, has been compared with Korybas.¹⁰ The first Battos was held to

¹ Pindar, *Pyth.* v. 82-88, and Schol. Pind. *Pyth.* v. 108. Cf. Studniczka, *Kyrene*, pp. 129, 130. There was an 'Απτηνοριδῶν λόφος between Cyrene and the sea.

² Virg. *Aen.* iii. 133, cf. Serv. *ad loc.* Virgil makes the Trojans come from Crete.

³ It is worth recalling that in Sicily as in Crete the archaeological evidence also points to an early 'Trojan' influence. A clay 'idol,' certain remarkable bone ornaments and several forms of clay vessels found by Prof. Orsi in 'aeneolithic' rock-tombs of the province of Syracuse are identical with those from the early strata of Hissarlik. (Orsi, *La necropoli Sicula di Castelluccio*, Bull. di Paletn. 1892, &c. p. 1, *seqq.* Cf. Patroni, *Anthropologic*, 1897, pp. 134, 139, 140.)

⁴ Diodorus, xx. 17 records of Agathocles, 'Ἐλυμας τὸν βασιλέα τῶν Λιβύων εἰς συμμαχίαν προσελάθετο. See my note in Freeman's *Sicily*, vol. iv. p. 419.

⁵ Thucydides vi. 2.

⁶ The spring Lilybaion, from which the town was named, seems to contain the Libyan word

for water = *lily*, according to Hésychios (s.v.). The word for 'water' in use among the existing Libyan dialects—Kabyle, Shilha, and Tuareg—is however *anān*.

⁷ The name is not only frequent in the Libyan sepulchral inscriptions, but under the form Didi appears as that of the father of the Libyan Prince Marmaiou, who headed the great attack of European and West Asiatic confederates on the Egypt of Menephthal. Another Didi, perhaps the son of Marmaiou (Maspero, *Hist. Anc. des peuples d'Orient*, p. 266) fought against Ramses III.

⁸ Compare *Oropus* and the Illyrian *Acropus*. The points of comparison between the early tribal and geographical names of North Africa and Italy are, perhaps, still more numerous. Compare for instance the *Ausenses* and *Ausones*, the river-name *Ausere* (perhaps Wed Neffetia) and the *Auser*, *Uthina*, and *Vedenum* (Udine), *Salassi*, and *Salassi*. The Libyan connexion with Spain is still more conspicuous.

⁹ Herod. iv. 150 *seqq.*

¹⁰ Studniczka, *Kyrene*, p. 129.

be a grandson of a King of Axos,¹ and the nymph Kyrêne herself was carried by Apollo to Crete² before she reached the land that was to bear her name. These more or less mythical traditions were not simply called into being to account for the fact that a third of the settlers in Cyrene were of Cretan stock.³ They imply that an earlier connexion than that established under Theraean leadership existed between Crete and Barka, and the fact that the pilot was chosen from that easternmost Cretan region, which, as we know from the Praesos inscription, retained its non-hellenic speech to the sixth century before our era, has perhaps a special significance.

The race affinities subsisting between the early Cretan population and the 'Trojan' settlers in Barka and elsewhere may well have had a reflex action on the island. The Ægean settlers on the North African coast may have become partly fused with the Libyan indigenes. The story of Dido and Æneas is, indeed, the poetic record of such a blending of the Thraco-Phrygian and native elements, just as at a later date the Greek colonists of Cyrene blended with their 'yellow-haired' Libyan neighbours.⁴ The fortune of war may from time to time have obliged some of these already half-acclimatised Ægean settlers to return to their older seats on the northern shores of the Libyan sea. In the same way the traditions of Danaos and Ægyptos—though these rather concern Rhodes and Argos—seem to point to a similar return wave of a European (or Anatolian) population from the Delta.

The ebb and flow of these early tides of Ægean enterprise and migration may have contributed towards the diffusion of Egypto-Libyan elements in primitive Crete. But there is every reason to infer an impulse of a more direct kind from the Nile Valley and its borderlands. In the forgathering of the Thraco-Phrygian and Libyan races there is no reason to suppose that the passive rôle was always on the Libyan side. On the contrary, in the earliest historic records of this connexion between the mainland borderers of Egypt and the Ægean peoples, it is Libyan princes, with distinctively Libyan names, who take the lead in the Confederacy. The enterprise of Marmaiou, the son of Didi, against the Egypt of Menephtah seems to have had its counterpart in the West. The companion and charioteer of Héralkés, whose Hellenized appellation, Iolaos,⁵ covers the name of a Libyan divinity, finds his

¹ Herod. iv. 154.

² *Libyka* of Agroitas, *Fr. h. Gr.* iv. 294. See Studniczka, *op. cit.* p. 127.

³ Herod. iv. 161.

⁴ An interesting reference to the social intercourse between the Theraean colonists and the earlier Libyan inhabitants of Cyrene is found in Kallimachos, Hymn 2, 86: *ἀρχήσαρτο μετὰ ξαθῆσαι Λιβύσσαις.*

⁵ Halévy, *Études berbères*, p. 157, where the form *Ialaou* of a bilingual inscription appears

as *Iólaos* in the Greek transcription. Halévy however supposes that the connexion of *Ialaou* and *Iolaos* the son of Herakles is a mere coincidence. 'Les grecs, ayant entendu prononcer en Libye le nom *Iala*, *Ialaou*, ont été naturellement portés à y voir une de leurs divinités qui avait un nom semblable.' But this does not explain the specially Libyan connexion of *Iolaos* even in Greek legend. The double 'coincidence' is rather too improbable.

special sphere of action in Sardinia. Perhaps we may even detect a still further stage of Libyan colonisation in the name of Massalia.¹

These echoes of more distant enterprise make it the more probable that Crete, where the records of a primitive intercourse with the Nile Valley are so unmistakable, should have been betimes the goal of Libyan settlement. There were doubtless successive waves of migration in this direction, the impulse to which may have occasionally been the triumph of Egyptian arms over the Libyan tribes bordering on the Delta. In particular, the special relation in which the early Cretan remains have been shown to stand to the typical products of the Twelfth Dynasty period may be not unconnected with the Libyan triumphs of Amenemhat I. An abiding tradition of a historic episode of this kind, as well as of the fusing of Libyan and Cretan elements, may indeed be traced in a legend preserved by Diodoros. Ammon, expelled from Libya, settles in Crete, and marries Krêtē, the daughter of one of the Kuretes.² That a certain community of type between Cretans and Libyans was really recognised, appears from the ethnic classification of Polemōn, the physiognomist, who divides the Libyans—he is not here speaking of Cyrenaean Greeks—into two classes: Negroes (*Αἰθιοπες*) and Cretans.³

§ 3. *Proto-Egyptian or Egypto-Libyan Comparisons.*

The Egypto-Libyan connexions of prehistoric Crete invest any attempt to trace affinities with its early script on that side with a certain degree of *a priori* probability. But this is heightened by the fact that the signs themselves are found in the case of the Libation Table, of the stone vases, and of the prism seals engraved on objects the prototypes of which seem to be on the one hand of Old Empire Egyptian, on the other of 'Libyan' origin. So far as the pictographic class of Cretan signs is concerned, although its general independence is clear, the influence of certain Egyptian hieroglyphic forms is unmistakable, and examples of this have been already referred to in my previous paper.⁴ Fresh parallels of the kind may perhaps be detected in the two-horned symbol of Fig. 20 and still more clearly in the fringed or 'door' symbol on the seal Fig. 7d answering to the Egyptian sign for 'palace' or altar.⁵ The second character on the Libation Table has also been cited as a probable example of this indebtedness.

¹ Compare the Massyli and Massaesylī of the province of Carthage. *Mas* in the modern Berber dialects still means 'son' or 'descendant' (Tissot, *Afrique Romaine*, i. p. 446); hence the frequency of this element in Libyan tribal and personal names.

² Diod. *Hist.* iii. c 71.

³ Οἱ μὲν Αἰθιοπες Αἰθιοψίν θμοιοι, οἱ δὲ εἰσὶ Κρῆτες. Polemon, *Physiognom.* lib. i. (in *Scriptt. Physiognomici Veteres*, ed. J. G. F. Franzius, Altenburg, 1780, p. 184). Polemon,

who was personally acquainted with Cyrenaean Greeks, could not have embraced them under the — to a Greek—barbarous designation of 'Libyans.' Had he done so moreover, he would in this passage have committed the further absurdity of confounding the blonde, European-like Libyan element with Negroes!

⁴ E.g. the adze (*Pictographs*, &c., No. 22), the saw (*ib.* No. 23), the spouted vase (*ib.* No. 28), and the coil (*ib.* No. 69).

⁵ See above, p. 340.

But if we have here a derivative form of an Egyptian sign which in its primary sense of 'hall' was connected with festivals and gatherings, we have just such an element as the Libyan borderers of the Egyptians may have borrowed but which the indigenous Cretans would hardly have sought so far afield. In other words the imitation of such a sign is on all fours with the imitation of Twelfth Dynasty decorative designs and of the form of the Libation Table itself which, as already observed, would most naturally have effected itself among a population actually bordering the Nile Valley.

The signs found on the 'Libyan' pottery of Naqada afford an interesting parallel to this phenomenon. There too, side by side with exclusively native symbols, others of which it may at least be said that they are common to the Egyptian hieroglyphic series occasionally appear.¹ Among these may be noted a kind of vase (*an*), the water sign (*mu*), the signs for the king of Upper and Lower Egypt.²

The field for comparison on the Egyptian side has been greatly enlarged by recent discoveries. In Table I. of my first work on the Cretan 'Pictographs' the parallelism between the Aegean linear signs and these found by Mr. Petrie at Kahun and Gurob has been already set forth.³ But these signs, occurring on sherds and other objects for the most part of Twelfth Dynasty date, can now no longer be explained as the work of Aegean foreigners in Egypt. The further discoveries at Naqada and Abydos show that they fit on to an indigenous class which makes its appearance in the Nile Valley before the time of the first Egyptian Dynasties.

In the early stratum of the sanctuary of Min at Koptos, Professor Petrie had already discovered colossal statues of the God engraved with primitive hieroglyphs together with figures of animals all of which from their archaic style he ascribed to the prehistoric age of Egypt. Animal forms, lions and hawks of precisely identical types occurred in the cemeteries excavated by him and Mr. Quibell at Naqada and Ballas on the opposite bank of the Nile which revealed the existence of a hitherto unknown form of early culture in Egypt. The weight of local evidence however at that time inclined Mr. Petrie to assign the Naqada relics to a period posterior to the Fourth Dynasty though in any case earlier than the Twelfth.

Yet the difficulties in the way of such an explanation were from the first unsurmountable. How, for instance, explain the fact that among the contents of nearly 3,000 graves, no single scarab nor any familiar ornament of Egyptian fabric was discovered? If the remains unearthed at Naqada were to be simply ascribed to a sporadic settlement made by successful invaders of Pharaonic Egypt during the period between the Fourth and the Twelfth Dynasty, how was it possible that they should contain no scrap of the vast stores of plunder accumulated by such 'Spoilers of the Egyptians'?

¹ See below, pp. 383, 384

² Petrie, *Naqada*, Pl. lii. Nos. 55, 74, 75, 76. The sign for the crown of Lower Egypt is in relief. Mr. Petrie points out (*op. cit.* p. 64) that this, which was the characteristic crown of the

Libyan Goddess, Neit, was probably the Libyan crown generally, since its value *bat* corresponds with the Libyan word for *king*, preserved, as Herodotus records, in the Greek *Batlos*.

³ *Pictographs, &c.*, p. 80 [349].

But these settlements are not sporadic. The evidence of their wide diffusion in the Nile Valley is rapidly accumulating and a wholly new light has been thrown on their date and ethnic relations by the discovery by M. Amélineau at Abydos of tombs belonging to the first two Dynasties and at Naqada itself by M. de Morgan of the royal tomb, now identified with that of Menes, the founder of the Egyptian dynasties. The culture first brought to light at Ballas and Naqada now stands before us in its true relation to that associated with the earliest monuments of Pharaonic Egypt.¹ In part, no doubt it overlaps these earliest dynastic relics, but in the main it belongs to the true prehistoric age and to the indigenous stock which held the Nile Valley before the conquering race of 'copper-smiths' poured into it from the Red Sea littoral. It is at most survivals of the older form of culture such as we see it at Naqada that we find associated with the remains of the First and Second Dynasties.²

As to the character of the autochthonous race of Egypt, there seems to be good reason for accepting the view that they are to be identified with the people of the Oases—the Tahennu or Tamahu, a race of Libyan stock who in early times extended as far as the Nubian borders of Egypt.³ Members of this white-skinned race—so European in its affinities—still formed a distinct part of the Egyptian population as late as the fourth Dynasty though reduced to the position of helots.⁴ We may provisionally apply the term 'Egypto-Libyan' or 'proto-Egyptian' to this early indigenous population of the Nile Valley.

It is probable that the influences brought to bear in an intensive form by the Pharaonic conquest, were already beginning to operate on the primitive population of the Nile Valley long before the time of Menes. The native race had no doubt attained great proficiency in the fabric of stone vases at a period when there is no trace of actual contact with the dynastic Egyptians.

¹ E. Amélineau, *Les Nouvelles Fouilles d'Abydos* (1895-1896), Angers, 1896, *Les Nouvelles Fouilles d'Abydos* (1896-1897), Paris, 1897 : De Morgan, *Recherches sur les Origines de l'Egypte* (Paris, 1896), p. 76 seqq. The Abydos and Naqada finds and the views expressed by M. de Morgan, M. Maspero, and Mr. Petrie on the civilisation to which they belong, are discussed by M. Salomon Reinach, *Le préhistorique en Egypte d'après de récentes publications*, *Anthropologie*, 1897, p. 327 seqq. Thanks to the kindness of M. Amélineau, I have been able to inspect the greater part of the objects obtained by him during his two campaigns and thus to express an independent opinion on the bearing of these discoveries. The appearance of the second volume of M. de Morgan's *Origines* with the account of the royal tomb, and the essays contained in it by Professor Wiedemann and M. Jéquier have

greatly strengthened the argument.

² The contents of an intact tomb excavated by Mr. Quibell at El Kab and presented to the Ashmolean Museum by the 'Egyptian Research Fund' are specially important in this connexion. The tomb itself was dated by a cylinder bearing the name of King Khaires of the Second Dynasty, and in it, side by side with relics of the 'Pharaonic' class, were painted vases representing a late development of 'Naqada' types.

³ See Wiedemann, *Question de l'origine du peuple Egyptien* in De Morgan, *Origines de l'Egypte*, ii. p. 219 seqq. It will be seen that, though divergent on some other points, Professors Petrie, Maspero, and Wiedemann are agreed in attributing the culture of Naqada to a people of Libyan stock.

⁴ *Ib.* p. 221. Cf. De Morgan, *Origines*, &c., i. p. 197 they are depicted with flat heads and red beard.

It has however been pointed out by Dr. Schweinfurth,¹ that the porphyritic and crystalline materials of which a large proportion of these vases consist must have been derived from the eastern parts of Nubia or even further afield.

But in the main this prehistoric culture of Egypt, like the race itself, has a Mediterranean range.² It even shows some distinct points of sympathy with primitive Aegean culture. The obsidian knives³ take us to Santorin and recall the very ancient relations between Thera and the Libyan coast. The early use of stone vases is equally characteristic of both areas. The primitive 'idols' of the Proto-Egyptians in some respects point to a similar relationship. The tattooed female figure from Naqada⁴ which illustrates a practice foreign to historic Egypt, but universal among the Libyans down to their Berber descendants of to-day, finds its counterpart on the Aegean side. A primitive marble image of a squatting female found near Sparta, has its bare arms engraved with square and zigzag decorations,⁵ recalling the tattoo-marks seen on the arms of Thracian women on Greek fifth-century vases.⁶ In certain bronze needles with steatite handles found in the pre-Mycenacan tombs of Amorgos, where various colouring materials also occur, Dr. Blinkenberg has recognised the actual tattooing instruments of the early Aegean population.⁷ A rude Egypto-Libyan clay figure from the pre-historic cemetery of Gebel-el-Tarif⁸ though differing from the primitive marble 'idols' of the Aegean islands in its bent knees⁹ and arms held close to the side, yet shows a remarkable resemblance to them in its general shape, while in its recurved flat topped head it reproduces one of their most characteristic features (see Fig. 33).

The steatopygous female figures of clay and limestone from the Proto-Egyptian graves, while also betraying a close analogy with certain types of prehistoric Greece and Thrace, are almost the exact counterparts of the primi-

¹ *De l'origine des Égyptiens et sur quelques-uns de leurs usages remontants à l'âge de la pierre* (*Extrait du Bulletin de la Société Khédiviale de Géographie*, iv. Série No. 12 (1897), p. 16 seqq.). Dr. Schweinfurth points out that the materials of many of these vases point to the crystalline region east of the Upper Nile, and shows that something of this early industry still survives among the Bishareen and Ababdehs. The crystal bowls from Abydos are the most remarkable of all.

² See especially Petrie, *Naqada*, p. 62 seqq.

³ Actual vases of obsidian were found in the tomb of Menes (De Morgan, *Origines*, &c., ii. p. 180, Figs. 625-627). Obsidian, however, is also found in Armenia (*op. cit.* p. 174).

⁴ Petrie, *Naqada*.

⁵ Dr. Wolters (*Mittb. d. Arch. Inst. in Athen* 1892, p. 52 seqq.), who considered that the engraving simply indicated painting. But Dr. Blinkenberg, *Praemykcniske Oldsager*, p. 42 seqq. (*Antiquités prémycénienes*, p. 46 seqq.).

has demonstrated the much greater probability that we have here to do with tattoo-marks. In the red streaks on the forehead and beneath the eyes of a large head from Amorgos (Wolters, *l.c.* p. 46) I have ventured to see the bloody nail-marks of a mourner. Dr. Blinkenberg, however (*loc. cit.*), regards these also as tattoo-marks

⁶ Schöne, *Museo Bocchi*, No. 167, Pl. 3, 2; Blinkenberg, *op. cit.* p. 48.

⁷ *Op. cit.* p. 44. One of these instruments, found with marble 'idols' in a tomb at Amorgos, is in the Ashmolean Museum.

⁸ De Morgan, *Origines*, &c., vol. i. p. 151, Fig. 373; reproduced vol. ii. p. 54, Fig. 111. I am indebted to M. de Morgan's work for the representation given in Fig. 33.

⁹ A slight bending of the knee is however visible in a marble figure from Phaestos; (see my *Sepulchral Deposit of Hagios Onuphrios near Phaestos*, in *Cretan Pictographs*, &c. (Quaritch, 1895), p. 126, Fig. 129).

tive Maltese figures¹ in the same materials, which reproduce moreover the curious side-squatting attitude. This connexion with Malta fits in well, as Mr. Petrie has noticed, with the Libyan hypothesis, and another interesting parallel may be adduced which points in the same direction.

The exquisite flint implements of the 'proto-Egyptian' tombs display in their most characteristic refinement, the chipping of a surface previously ground, an analogy with Spanish and even Irish Neolithic fabrics. This point of agreement with the extreme West may of course be an accidental coincidence, but the reappearance of the highly characteristic flint rings of Naqada and Abydos in a more westerly African region has an unmistakable

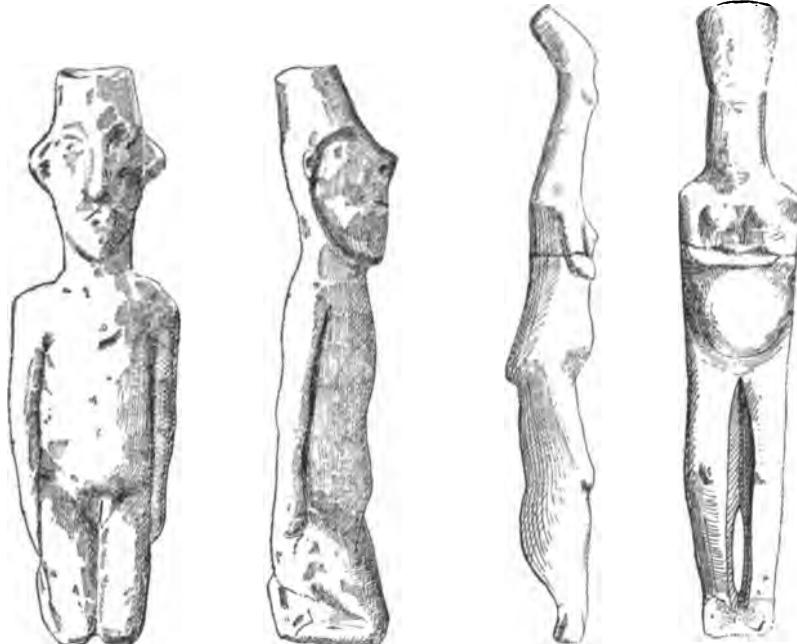


FIG. 33.—PROTO-EGYPTIAN CLAY FIGURE,
GEBEL-EL-TARIF. AFTER DE MORGAN.

FIG. 34.—MARBLE 'IDOL,' AMORGOS.

significance. Flint rings of the same type recur in a series of Neolithic stations extending from the province of Constantine by the Wed Rir (Oued Rir) towards the central Sahara.² Once more we are led in a Libyan direc-

¹ See *op. cit.* p. 129; Petrie, *Naqada*, pp. 18, 34.

² I ascertained this fact during a journey, in the spring of 1897, to the Constantine borders of Sahara. My thanks are specially due to Captain Farge, of the Bureau Arabe at Constantine, and to the engineer, M. Jus, at Batna, who had found flint rings, such as those described above, in the Neolithic settlements explored by

him while making the artesian wells in the Wed Rir. These, together with exquisitely worked flint arrow-heads and other implements, were found embedded in layers of broken ostrich-eggs. The flint rings are not mentioned in M. Jus' earlier report on these discoveries, *Stations préhistoriques de l'Oued Rir* (*Rev. d'Ethnographie*, 1887). The stations extend beyond Wargla.

tion. The non-Egyptian practice of burying the dead in a contracted posture also recalls that of the Nasamones as described by Herodotus and reappears in the Dolmens of Tunisia, Algeria and Morocco.¹ The actual dismemberment of the dead body, practised by the Proto-Egyptians, has been compared with Diodoros' account of the Balearic islanders who pounded together the limbs and body of the deceased so as to fit them into their funeral jars.²

It is probable that when the prehistoric remains of Barka come to be unearthed, the same habit of using stone vessels, which is so characteristic of the Proto-Egyptians on the one side and of the Cretans and Aegean islanders on the other, will be found to receive a wider Libyan illustration. On the further shores of the Syrtes the use of large stone vessels of very primitive aspect is still a native characteristic. During a recent journey through southern Tunisia, I had myself occasion to observe a primitive form of stone water-vessel identical with a type of at least Mycenaean antiquity of which I had previously seen several examples above or near cisterns in the great prehistoric city of Goulas in Crete.³ It is needless, after what has been written in the previous section and in the account of the Phaestos Deposit, to dwell on the striking parallels presented by the primitive stone vessels of Crete and the Aegean islands with those of the early inhabitants of the Nile valley.

The same Mediterranean range of affinities is perceptible in the characteristic red-faced pottery of the Proto-Egyptians, which as being most prolific in the early linear signs has a special bearing on the present subject. Similar forms of red-faced pottery have been observed by Captain Lyons in the Western Oasis of Dakhlah.⁴ Elsewhere it finds its nearest parallels in the Copper Age cemeteries of Cyprus and the early strata of Hissarlik and of the prehistoric sites of the Greek islands and mainland. In the Libyan region proper it fits on to the red-faced pottery of the Tunisian and Algerian Dolmens and, like the steatopygous figures, reappears at Malta.⁵

These affinities of the early red-faced pottery of Naqada have an important bearing on the origin of the linear signs which appear engraved upon them, and tend to show that they belong to the non-Pharaonic, indigenous element of the Nile Valley. The culture with which they are connected has, as we have seen, a Mediterranean, especially a North African, range. In contrast to this, the most primitive hieroglyphs, such as those on the colossal

¹ Cf. Bertholon, *Exploration Anthropologique de la Khoumirie*, p. 66; Carton, *La Nécropole de Bulla Regia* *Bull. Arch.* 1890, etc.

² Diod. v. 18. Cf. Wiedemann (in De Morgan, *Origines, &c.*, ii. p. 221).

³ Below the akropolis site of Takrouna was a broken limestone vessel of this kind not far from the village well. In the garden of the neighbouring village of Dar-el-Bey was placed another of the same kind, and probably from the same locality. The characteristic features

of these—the conical cavity and ear-like ledge-handles are identical with those of the Cretan vessels (see *Goulas, the City of Zeus*, in the *Annual of the British School at Athens*, 1895-1896, pp. 189, 190. For the general form of the Libyan vessels, compare Fig. 11. The ears are seen better in Fig. 12.

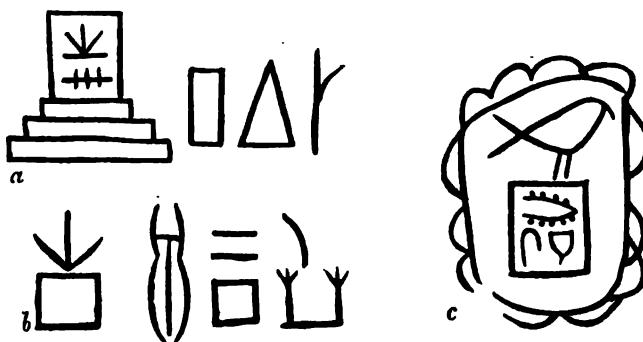
⁴ Cf. Petrie, *Naqada*, p. 63.

⁵ An interesting triple vase of similar ware and primitive fabric is preserved in the Museum at Valetta.

Mins from Koptos, show forms of marine shells and saw-fish, derived as Professor Petrie has pointed out, from the Red Sea.¹

The linear characters found on the Proto-Egyptian pottery at Naqada recur to a considerable extent on pottery found in tombs of the earliest dynastic period at Abydos, side by side with true hieroglyphic forms. At Abydos there is perceptible a certain reaction of linear indigenous signs on the more elaborate and pictorial characters of the Pharaonic people. Thus in several cases the linear forms here are simply Egyptian hieroglyphs very rudely scrawled.

In the examples—taken from rude vessels of the Abydos tombs—given in Fig. 35, there can be no doubt as to the hieroglyphic derivation of some of the characters such as the beetle (*khuper*) and the *ka* sign. There is therefore a presumption that the other signs grouped with them may be also linear sketches of true Egyptian forms, though it might puzzle an



SIGNS ON CLAY VESSELS, FROM ROYAL TOMBS
OF ABYDOS. EXCAVATED BY M. AMÉLINEAU.

FIG. 35.

Egyptologist to identify certain of these. It is however noteworthy that while the hieroglyphic inscriptions in these early tombs occur on objects of higher artistic execution, and of exotic materials, such as the vases of crystalline and porphyritic rocks, the simpler signs are found on rude clay vessels made for humbler domestic use.

This reduction of the more elaborate hieroglyphic forms to simple linear signs, which at Abydos is quite unmistakable, finds a certain amount of analogy on the still earlier indigenous vessels of Naqada,² and suggests some curious questions. We now know that by the time of Menes the highly developed hieroglyphic script of the dynastic Egyptians had taken firm root in the country. But a large proportion of the hieroglyphic signs—the lotus-

¹ *History of Egypt from the Earliest Times to the Fifteenth Dynasty*, pp. 13, 14.

rude linear *ka*-sign, Petrie, *Naqada*, Pl. Iv. No. 319.

² A clear instance of this may be seen in the

sprays and river-craft, the water-birds, fishes, crocodiles, and other characteristic animals, already by the time of the First Dynasty become conventionalised types,—are of indigenous Nilotc origin. It follows then that many of the elements of hieroglyphic writing had been growing upon the banks of the Nile long before the time of the first historic dynasty. If the race that brought these pictorial elements to maturity is to be regarded as distinct from the old inhabitants of the land, whose remains have now been recog-

T A B L E . I I I			
PROTO-EGYPTIAN OR EGYPTO-LIBYAN SIGN-GROUPS		CRETAN AND AEGEAN SIGN-GROUPS	
<img alt="Proto-Egypt			

nised at Naqada and elsewhere, it must at least have been brought into very early contact with them. Hence there is a possibility that the beginning of hieroglyphic script reacted on the linear native signs at a much more remote date than that of Menes. And the hieroglyphic figures themselves—how far may they not simply represent the coming to life of still earlier linear types? The same inquiry meets us in Crete.¹

¹ See below, pp. 394, 395.

There can be no doubt that the linear signs at Abydos on the whole belong to the same indigenous family as those from the pre-historic graves of Naqada. The correspondence, in form and arrangement, must be regarded as conclusive. In both cases these primitive signs may have been used for a limited purpose—often perhaps to indicate the contents of the vessels—but it will also be seen that some of the most characteristic recur among the ensigns found on the early painted pottery.

Both at Naqada and Abydos, characters of more pictographic aspect—and in some cases identical with Egyptian hieroglyphic forms—are at times coupled with the linear signs. Several of the groups of linear signs are found accompanied by one of this more pictographic class—an interesting point of correspondence with early Cretan and 'Aegean' usage. This is illustrated by some examples¹ on Table III., where specimens of proto-Egyptian and Aegean sign-groups are placed side by side for comparison.

Thus in the first group the frequent ψ -like character of the Naqada series is headed by a vase like that which forms the Egyptian hieroglyphic *an*, standing for a tributary. In the second group two geometrical signs are preceded by a figure resembling the bowl or basket = *nəb*, a lord. A third group which appears on two pots from Abydos, shows a more or less pictorial fish accompanied by a linear square. The fish is of frequent occurrence among the Cretan pictographs.

Taken as a whole, the two series of proto-Egyptian or Egypto-Libyan and Aegean sign-groups as seen in Table III. present a remarkable parallelism. It is true that there is no combination of signs which absolutely corresponds in the two classes. But the general arrangement is strikingly similar, and of thirty-two proto-Egyptian characters represented nearly a third show a close resemblance to forms that occur in the parallel series of Cretan and Aegean sign-groups.

A comparison of the individual signs of the two classes will be found in the first and second columns of Table IV. which are to a certain extent supplementary to those given in Table I. of my former work.² Due allowance being made for the selective process requisite for such a tabulation, it must nevertheless be allowed that the amount of parallelism in the two groups is very considerable.

§ 4. Comparisons with the Libyan and Tuareg Alphabets.

It is time to recall the existence on the Libyan side, at a considerably later date than the remains with which we have been dealing, of a very remarkable indigenous script which enables us to supplement these comparisons.

¹ In representing the Naqada signs I have eliminated tentative scratches due to want of skill in the engraver, and adhered to the essential outlines.

² The Egyptian forms there given were taken from the pottery discovered by Mr. Petrie at

Kahun and Gurob, and were then described as 'Aegean Signs found in Egypt.' In view of the new evidence, especially that of Naqada, this description must be definitely abandoned. In Table iv. they are called 'Egypto-Libyan or proto-Egyptian' signs.

CRETAN AND AEGEAN	EGYPTO-LIBYAN OR PROTO- EGYPTIAN	LISYAN IN- SCRIPTIONS AND TIFINAGH	CRETAN AND AEGEAN	EGYPTO-LIBYAN OR PROTO- EGYPTIAN	LIBYAN IN- SCRIPTIONS AND TIFINAGH
1	↑↓	↑↓ N. K.		☒☒	☒☒ N. K.
2	✗✗+	✗✗+ N. K.	+✗		
3	YY	YY N. K.			
4	✗	✗ N. AB	✗→ [T. TH]		
5	†	†† K. N. K.			
6	□	□ K.	□□ [DU. TIFM.]		
7	~ ~	~ ~ N. K.	~ ~ [I]	AA	AA AB
8	日 日	日 日 N. K.	≡ [::] [GN]	F	F F N. K.
9	□□□	□□□ N. K.	≡≡≡ [H]		● [A]
10	●●	●● AB.	●● AB.	I	I N. K.
11	Γ	Γ 1 K. N.	Γ [G]	YY	YY AB.
12	ΛΛ	ΛΛ 1 N. K.	Λ 1 [G]	ℳℳ	ℳℳ AB. N.
13	∨	∨ ∨ N. K.		*	*
14	Η	Η N.	Η [K]	↔↔	↔↔
15	Η	ΗΗ N. K.	Η [F]	□□	□□ AB.
16	田 曲	田田田 K. AB..K.	# [TIF.Z.]	□	□□ AB. N.
17	#+#+	#+#+ AB.	#+#+ [SH]		
18	☒	☒☒ N. K.	☒☒ [P PH.]		
TABLE IV					
N - NAQADA AB. = ABYDOS K. = KAHUN CUR = CUROB					
THE LETTERS IN BRACKETS GIVE THE MEANING OF THE LIBYAN AND BERBER LETTERS [LIB=LIBYAN TIF=TIFINAGH]					

The later Libyans possessed an independent system of writing which had taken such a strong hold on their national life that it maintained itself intact side by side with the intrusive systems of the Carthaginian, the Roman, and even of the Arab conquerors, and survives to this day essentially unchanged in the alphabet known as the 'Tifinagh,' of the Tuaregs, a Berber race of Sahara. The first known example of this Libyan script, the bilingual inscription of Thugga¹ containing a Phoenician as well as a native text, was discovered as early as 1631; the archaeological exploration of Roman Africa, for which the world is so deeply indebted to French enterprise,² has now accumulated a whole series of Libyan inscriptions and among them some of the bilingual class, Carthaginian, Greek, and Latin. The diffusion of these Libyan records is very wide, extending at least sporadically as far as Sinai in one direction, and the Canary Islands in the other. The great mass of them, however, have naturally been found within the limits of the best explored region of Roman Africa, in eastern Algeria, otherwise known as the Province of Constantine, and now, since the French occupation, in many parts of the Regency of Tunis.³ The form of script thus revealed is quite distinct from the Phoenician and Latin forms with which it is at times associated, and would therefore seem to have been an independent Libyan possession before the days when the North African population was seriously influenced by the Carthaginian or the Roman types of culture. The earliest approximately dateable inscription of this class appears to be that of Thugga, which has been referred to the third or fourth century B.C., but the probability that much earlier examples will ultimately be discovered is heightened by the fact that the more easterly region where on general grounds its source is most likely to lie, is at present practically sealed to observation. That this script also held its own side by side with that of the Greek colonists in the region of Barka, is shown by an inscription in a cave at Derna, a district bordering on Cyrene. We have thus evidence of the existence on the part of the North African coast nearest to Crete of an ancient and independent Libyan script, which had struck such deep roots in African soil that the whole prestige of European and Asiatic conquest, of higher civilizations, and even of Mahometan fanaticism, has failed entirely to eradicate it.

The survival among the modern Tuaregs of this old Libyan form of writing is a phenomenon of great retrospective utility. The 'Tifinagh' or

¹ Cf. Gesenius, *Monumenta Phoeniciae*, Tab. xlvi. De Saulcy, *Observations sur l'Alphabet Tifinagh*, *Journ. As.* 1849, p. 247 seqq. Judas, *Études Phéniciennes*, Pl. xxxi. The inscription fixed into the façade of a Mausoleum of a Libyan Prince, remained *in situ* at Dougga till 1842, when the British Consul-General at Tunis, Th. Read, ruined the whole wall of the monument in order to obtain possession of it. At his death it was sold, and it is now in the British Museum. See P. Gauckler *l'Archéologie de la Tunisie*, p. 13 seqq.

² Faidherbe, *Inscriptions Numidiques*, Paris,

1870. Halévy, *Études berbères*, *Journal Asiatique*, 1874 (Ser. vii. T. iii. p. 73-203; T. iv. p. 369-416); Letourneau, *Du déchiffrement des Inscriptions Libyco-Berbères* (*Fourth International Congress of Orientalists*, Florence, 1878), vol. i. p. 57 seqq.; and the papers in the *Réveil des Notices et Mémoires de la Société Archéologique de la Province de Constantine*, notably those by Dr. A. Judas (T. xiii. p. 69 seqq. T. xiv. p. 293 seqq.) Dr. V. Rebout (T. xvii. p. 55 seqq., Pl. I.—XII.; T. xix. p. 211 seqq., Pl. VI.—XIV.).

³ Some of these may now be seen in the Museum of the Bardo.

Tuareg alphabet which was first noted by the English traveller Oudney¹ in the Oasis of Ghat, has preserved almost intact² the great majority of the old letter-forms together with their values.³ This evidence added to that already supplied by the bilingual inscriptions, enables us to ascertain with certainty the sounds of most of the original Libyan letters. At the same time the long survival⁴ of this ancient script among the tribes of Sahara, affords additional proof of the deep root taken by it in North African soil.

The correspondence between the old Libyan script and the Tifinagh is not confined to the form and value of the letters. It also extends to the arrangement, which on the Libyan inscriptions is almost indifferently in vertical or horizontal columns. Oudney in his account of the Tuareg writing remarked a similar peculiarity.⁵

The great simplicity of the Libyan script and the extent to which it is made up of mere reduplications of straight lines arranged alternately upright or lengthwise has suggested the theory that it is of purely artificial origin.⁶ That an artificial element may exist in it is always possible, yet in other respects affinities can be traced with a much wider and geographically connected group of alphabets and the balance of probability greatly inclines towards the simplification of more complicated forms as against the spontaneous invention of a perfected system.

One or two isolated comparisons may be found between Libyan and Phoenician letters.⁷ A somewhat greater community may be traced between certain Libyan characters and those of the Minaeo-Sabaeon alphabet of South Arabia,⁸ which have partly survived in the Himyaritic and Ethiopian. This Sabaeon script is now known to be of great antiquity and its existence is alone

¹ See *Travels and Discoveries in Northern Africa in 1822, 1823, and 1824* by Major Denham, F.R.S., Captain Clapperton and the late Dr. Oudney, London, John Murray, 1826, Vol. I. pp. xlvi, xlvii, lxxxvii, lxxxviii.

² For the Tuareg or Berber Script and comparisons with the ancient Libyan see especially De Saulcy, *Observations sur l'Alphabet Tifinagh, Journ. Asiat.* 1849, p. 247 seqq.; A. Hanoteau, *Essai de Grammaire de la Langue Tamachek*, p. 3 seqq. Letourneau, *IVth Congress of Orientalists*, Vol. I. p. 57 seqq. Judas, *De l'Écriture Libyco-Berbère, Rev. Arch. N.S.* vi. 1862. Tissot, *Province Romaine d'Afrique*, I. p. 517 seqq.

³ An exception is found in O, □, equivalent to B in the old script, but now representing S.

⁴ The Tifinagh script is known to be still in use in the Ahaggar range of Sahara. It seems to have been also current within recent times in Morocco. M. Tissot was informed that MSS. of the Koran in the Berber alphabet existed in the Rif Mountains. Tissot, *Province Romaine d'Afrique* I. 527.

⁵ *Op. cit.* I. p. lxxxvii. 'On almost every

stone in places they frequent, the Tuarick characters are hewn out. It matters nothing whether the letters are written from right to left, or vice versa, or written horizontally.' As this last position is meant to be different from the others it is obvious that 'horizontally,' is here a slip for 'vertically' or in upright columns.

⁶ Meltzer, *Geschichte der Karlhager*, I. p. 438 n. 26, in view of the 'strong geometrical constructive character' of the Libyan alphabet suggests that it was a creation of Massinissa, in furtherance of his national Numidian policy. But it appears to go back at any rate considerably before his date.

⁷ As for instance the forms of the A, I, S and T.

⁸ Dr. Isaac Taylor, *The Alphabet* (1883), Vol. I. p. 153 observes that 'in many respects the Libyan agrees curiously with the South Semitic Alphabets.'

Dr. Judas *De l'Écriture Libyco-Berbère, Revue Archéologique*, N.S. VI. (1862) p. 167, compares Himyaritic and Ethiopian forms.

sufficient to place the problem of the origin of the North Semitic or Phoenician group in a wholly new light. These somewhat distant affinities may be found to have a value of their own whenever the mutual relationships of the earliest scripts of south-western Asia and the east Mediterranean basin come to be satisfactorily elucidated.

But it is on Libyan ground itself that still closer materials for comparison may now be found. Wide as is the gulf of time that separates the earliest monuments of the class now under consideration from the inscribed vases of Naqada and Abydos their general character corresponds in a remarkable degree with that of these earlier Egypto-Libyan or Proto-Egyptian signs. In the later Libyan and Berber, a process of selection and differentiation has reduced their number and adapted simple linear characters of this primitive type to the needs of a regular alphabet. But the third column Table IV. in which the later Libyan, including a few Tuareg forms, are set beside the signs of Naqada and Abydos shows sufficient degree of correspondence with the earlier Egypto-Libyan forms to warrant the supposition that they may have been derived from a very ancient source. The fact moreover that throughout the course of over two thousand years, the Berber letters have remained practically unchanged, removes the improbability of their having retained their shape for a much longer period.

These linear forms indeed consist of simple geometrical figures which, unlike the more complicated pictorial class, were little susceptible of modification. A cross, a circle or crescent, a line and its multiples, a square or two or three sides of it, two parallel lines crossed or joined, a zigzag, a triangle with crossed ends are distinguishing marks of such simplicity that they have little or nothing superfluous to throw off. It is however these simple linear forms that we already find on Egypto-Libyan vases at a date as early certainly, as the first appearance of Egyptian hieroglyphs.

The slight variation of form among the Libyan signs and letters at very remote periods suggests the further possibility of instituting a fruitful comparison between the later group of these and the Cretan and *Aegean* characters. In Table IV. the latter are compared with the Libyan script as seen on the gravestones of the native race in Carthaginian and Roman Africa, one or two variant examples of letters from the Tifinagh of the modern Tuaregs being also introduced. In the case of the slightly more elaborate forms the possibility of a certain degree of simplification must not be excluded, and, for this reason, conjectural comparisons like Nos. 8, 9, and 10, have been tentatively inserted in the Table. It must also be borne in mind that in the case of the Libyan forms a difference in the position of the letter counts for little. Apart from the fact that the Libyan characters are arranged indifferently in vertical and horizontal columns it also appears that the individual letters are habitually placed upright in the script of one African district and recumbent in another, so that they may be turned either way about for purposes of comparison. This variability of arrangement, which is, as has been already noticed, an Egypto-Libyan tradition, is shared, it will also be recalled, by the Cretan script. Upon the seal-stones the characters

are there found in upright columns¹ as well as in a horizontal order, and in some cases the lines apparently follow one another in boustrophedon fashion, alternately from right to left and left to right.

Oudney and his fellow-traveller, when their attention was first directed to the Tuareg letters, were at once struck with their European aspect. 'We imagined,' he writes, 'that we could trace some resemblance to the letters of Europe, and conjectured that they had been hewn out by some European traveller at no very distant period.'² In the same way Mr. Petrie first described the 'Egypto-Libyan' signs at Kahun and Gurob as 'Aegean,' and M. Amélineau writes of 'Greek inscriptions' on the rude pottery from the Royal Tombs of Abydos. The early script of Crete has produced a similar impression. On first inspecting the characters on the Diktaean Table I found it hard myself not to believe that I had before me some archaic form of classical Greek writing, and the signs on the Phaestos whorl were considered by more than one archaeologist who had seen them to be Byzantine!

The comparisons above instituted between the early Cretan and Aegean characters and those of Kahun, Naqada, and Abydos on the one hand, and of the Libyan alphabet and the modern Tifinagh on the other, show a very real amount of correspondence. Not only do certain simple linear signs of the same class appear in use at a very remote date among the primitive inhabitants of the Nile Valley, but there, as in the Aegean area, they occasionally appear grouped in a way which indicates their application as a form of writing. At a later date we find a selected series of similar signs used throughout a vast West-African region with alphabetic values. The Naqada and Abydos characters moreover show another striking point of parallelism with those of prehistoric Crete. There too groups are found in which the linear signs are headed or supplemented by others of a more pictorial class resembling Egyptian hieroglyphics.

These correspondences become the more significant when taken in connexion with the other indications cited above of a very early and direct inter-relation between Crete, the Nile Valley, and the opposite Libyan coasts. The conclusion to which they seem to point is that the Cretan and Aegean linear script must in a certain sense be regarded as a branch of a very ancient stock having a wide North-African extension.

¹ *E.g.* Pictographs &c., Figs. 21b, 24b, 25b, 30b, 30c, and Fig. 32a, b, c, d, and in the present series Figs. 5a, 9b, and 22. In other

cases the arrangement is still more irregular, recalling that of Hittite inscriptions.

² *Op. cit.* Vol. I. p. xlvi.

PART III.—CONCLUDING OBSERVATIONS.

The vast antiquity which the discoveries at Naqada and Abydos now enable us to attribute to the use of linear signs among the primitive population of the Nile Valley makes it no longer admissible to assume that they were introduced there from the Aegean side. When already at an earlier date than that of the first Egyptian dynasty, we find 'alphabetic' signs already grouped in such a way as to suggest a definite system of writing, we have some warrant for inferring that the proto-Egyptians were ahead of the Aegean peoples in the evolution of their linear script. On the other hand the very ancient relations which have been shown to have subsisted between Crete and the Egypto-Libyan world would lead us to expect that the early script of the island like its stone vases and various ornamental motives may have been influenced, and partly derived, from that quarter.

That the Cretan linear forms were wholly of exotic origin it is impossible to believe. Simple as these signs are, and early as they appear, we are entitled by all analogy to suppose that the linear characters are themselves only the worn survivals of a primitive system of picture-writing, in which, like the first drawings of a child on a slate, various objects are indicated by a series of lines. And that this rudest form of pictography was practised on European soil there is abundant evidence. A good instance has already been pointed out in the rude horned animal or 'Minotaur' which appears in linear strokes on one side of the Phaeostos whorl, while on the other is seen the head alone. The clay whorls from the early strata of Hissarlik, the contents of which, as already noticed, afford some very close parallels to the primitive Cretan remains, supply a series of similar examples. A linear figure of a quadruped, for instance, is reduced by successive stages of degradation to one horizontal, and four or even three dependent lines.¹ Identical examples are to be seen on the whorls and pottery of Broos in Transylvania and elsewhere in the Danubian regions, and very close parallels to the Trojan linear figures may be found as far afield as the sculptured rocks of Andalusia.² In the 'Maraviglie' and the still better examples, more recently discovered

¹ Compare the figures on the whorls represented in Schliemann's *Ilios* Nos. 1867, 1879 1886, 1903 and 1912. The ornamental character of the zones on the Hissarlik whorls and the constantly occurring repetitions of what are really only variants of the same figure all round the whorl make it difficult to recognise in those of the primitive class any definite 'inscriptions.' Nevertheless the analogy which Professors Gomperz, Haug and Sayce have pointed out between certain Trojan signs and those of the Cypriote and Anatolian syllabaries can hardly

be gainsaid.

² Examples of these inscribed figures on the 'Piedra Escritá' near Fuencaliente are given by Don Manuel Góngora y Martínez, *Antigüedades prehistóricas de Andalucía*, pp. 65–67. The same reduction of the quadruped to 4 lines is perceptible. The Andalusian signs afford a very close comparison with those of the 'Written Stones' ('*Hadjra Mektoubá*'), described by M. Flamand, in the south of the Oran Province of Algeria, *Anthropologie*, 1897, p. 285 seqq.

at Fontanalba in the Maritime Alps,¹ as well as in the linear figures on prehistoric stone monuments such as those of Brittany, Ireland and Scandinavia, we find analogous designs. It is in fact evident, without going back to the still earlier and very remarkable signs painted on the pebbles of the Mas d'Azil grotto,² that there exist throughout a wide European area the records of a primitive usage of linear picture-writing which already in prehistoric times showed a tendency to simplify itself into abbreviated linear signs.

'Nondum flumineas Memphis contexere byblos
Noverat: et saxis tantum volucresque feraeque
Sculptaque servabant magicas animalia linguas.'³

But these general considerations are quite compatible with the view that the early linear script of Crete and the Aegean coastlands stands in a specially close relation to that of the Egypto-Libyan group. The existence of a primitive European stock of rude pictographs and their simplified derivatives need not be called in question. But there are many indications that in Crete at any rate the beginnings of writing like the beginnings of many other arts were influenced from the Nile Valley or its borderlands. In the case of the more pictorial class of Cretan characters this influence can be proved to demonstration.

It is on the face of it difficult to explain the appearance in a small and isolated area like Crete of a system of writing so fully developed as to present linear forms that have practically remained unchanged to modern times. Comparisons have already been instituted in my former communication between many of these and the characters of the Cypriote and Anatolian syllabaries and even with the letters of the Semitic alphabet. But to whatever extent the converse may be true, it is impossible to derive the older forms seen in Crete and some other parts of the Aegean world from the systems which first show themselves on the Syrian and Canaanite coastlands at an apparently later date. In saying this, however, it is not meant to exclude the probability that a branch of the same great family of primitive linear signs which have left their traces throughout such a wide North African region may have spread over Canaan at a very early date. The Lachish signs, so closely related to those of Kahun as well as to certain Aegean forms, seem to be an indication of this. On the Asiatic side, however, these primitive linear characters, if they existed there at a date as early as that of some of the Cretan signs, were overlaid and obscured by the spread of the cuneiform system which, as we know from the Tell-el-Amarna tablets, was the current form of writing throughout Syria and Palestine in the fifteenth century B.C. It is not till five centuries later that a more perfectly equipped form of linear writing, the Phoenician alphabet, was able as it were to shake off the

¹ See Mr. C. Bicknell's communication to the Society of Antiquaries, Dec. 9, 1897; *Athenaeum* Dec. 18. These figures as is shown by the appearance of the halterd with three rivets

go back to the early Bronze Age (see my observations *Athenaeum*, *loc. cit.*)

² See M. D'Acy's account of these discoveries.

³ Lucan, *Pharsalia*, III. 220.

Assyrian yoke. It was the superior development of this, aided by the commercial enterprise of its possessors, that enabled it to oust, in part perhaps to assimilate, the more primitive and imperfect forms of writing existing on the Aegean shores.

The general results of the fresh materials that my recent journeys have enabled me to add to those already published may be summed up in a few words. The evidence that in early times, and long before our first records of the Phoenician alphabet, the art of writing was known to the Cretans receives striking corroboration. The view is also confirmed that we have to deal with two distinct yet inter-related systems, one pictographic in its character the other more purely linear. The generally indigenous character of the pictographic system emerges the more clearly from the occurrence of fresh examples illustrating the evolution of the conventionalised symbols from purely pictorial prototypes which occur on the more primitive class of seals. Thus we find the seated figure of a man, the disk with revolving rays, the spider, and a floral design common to the earlier and the later seals.

New evidence is also forthcoming of similar collocations of the later pictographs on different stones, such as the *W*-shaped symbol and the 'polyp,' the bent leg and gate,—collocations, which, like others already signalled, are specially valuable as showing that we have not to deal with the random insertion of chance figures but with a methodical graphic system. The discovery of a new class of pictographic seals of a form which could not have been used as an ornament, but is on the contrary that of a typical signet and closely akin to inscribed Hittite types, is also a valuable indication of the purposefulness of these groups of symbols.

The most recent discoveries fully corroborate the view, already expressed by me, that the later pictographic seals of the conventionalised class are mainly confined to eastern Crete, though a few like the convoluted bead-seal from Gortyna belong to the central area. The suggestion is thus confirmed that this quasi-hieroglyphic class which comes down to the borders of the historic period was the special property of the Eteocretan stock. Elsewhere in the Aegean area, as to a certain extent in Crete itself, the linear characters still continued in use, and they seem to have had a closer relation to the dominant elements of the Mycenaean world on the Peloponnesian side. In a more general sense, however, the name 'Mycenaean' must be equally applied to the peculiarly Cretan group of pictographic signs.

The linear system on the other hand, though it also overlaps the other, goes back to a very remote period. It seems to have reacted on the pictographic class, and to have been partly incorporated in it, but in this case, unlike the other, the proofs of evolution on Cretan soil from pictorial originals are not always so clear. The rude linear figures of men and animals on the very earliest class of seals partially indicate indeed an indigenous source: and in the Phaestos whorl we see the head of what is a rude linear animal on one side, becoming on the other a detached symbol. But the impression derived from the new materials supplied by the Psychro Libation Table is that this linear script had at a very early date attained a maturity

of form and a systematic application which seems to imply a long antecedent evolution, and is best explained by the influence of an older civilisation such as that of the Nile Valley. The Libyan element may, as suggested in the preceding sections, ultimately supply the link of connexion and explain how a more advanced system was brought to bear on the ruder family of Cretan and Aegean linear signs.

The evidence that has here been put together is in part indeed of such a nature as to place the very early relations between Crete and Egypt beyond the range of controversy. We have not only to deal with borrowings of Twelfth Dynasty decorative designs, of types of stone vases peculiar to the Old Empire, and even in the case of the libation tables of articles of cult. The Karnak prism seal shows the most typical form of Cretan seal in use among a probably Libyan population in the Nile Valley as early as the Sixth Dynasty, while the allied group of cylinders brings a whole series of Cretan and Aegean types into connexion with the same primitive element. Finally, the linear signs themselves, and a variety of early fabrics tend to show that a close relation existed between the indigenous population of the Nile Valley and those of Crete and the Aegean Islands at a period so remote that it goes back beyond the earliest historic dynasty.

That the linear or quasi-alphabetic signs, whether of primitive Egypt or of the Aegean area, were in the main ultimately derived from the rudely scratched line pictures belonging to the infancy of art can hardly be doubted. This consideration helps to explain the intimate relation in which Cretan linear signs stand to the later and more pictorial characters. For certain purposes fuller and more literal representation was still adhered to in the linear series, and a pictograph pure and simple appears at the head of linear signs in which the prototypes are no longer so easily recognisable. It has been noted that both in the Naqada and Abydos groups the same combination of the two kinds of character is found as on the early Cretan prism-seals.

But this partial survival of the practice of pictorial representation in place of linear 'shorthand' was as nothing to the wholesale revival of the pictographic style which took place in Crete during the Mycenaean period. This revival corresponds in the island with a renewed period of intensive Egyptian influence under the Eighteenth and Nineteenth Dynasties, so clearly marked in the borrowing of decorative and other designs. It is not unreasonable therefore to believe that it was this Egyptian influence which here, as in the neighbouring Hittite regions, promoted a reaction towards a more pictorial style of script.

The linear figures assume a more realistic aspect in keeping with an age in which the engraver's art and the artistic sense were more highly developed. On older stones like the Phaestos whorl¹ or the Arvi pendant² we see a mere outline representation of a horned head like the Phoenician *aleph*. The symbol now takes a fuller form and clothes itself as it were with flesh and

¹ *Pictographs, &c.* p. 15 [284] Fig. 11b.

² *Ib.* p. 17 [286] Fig. 16.

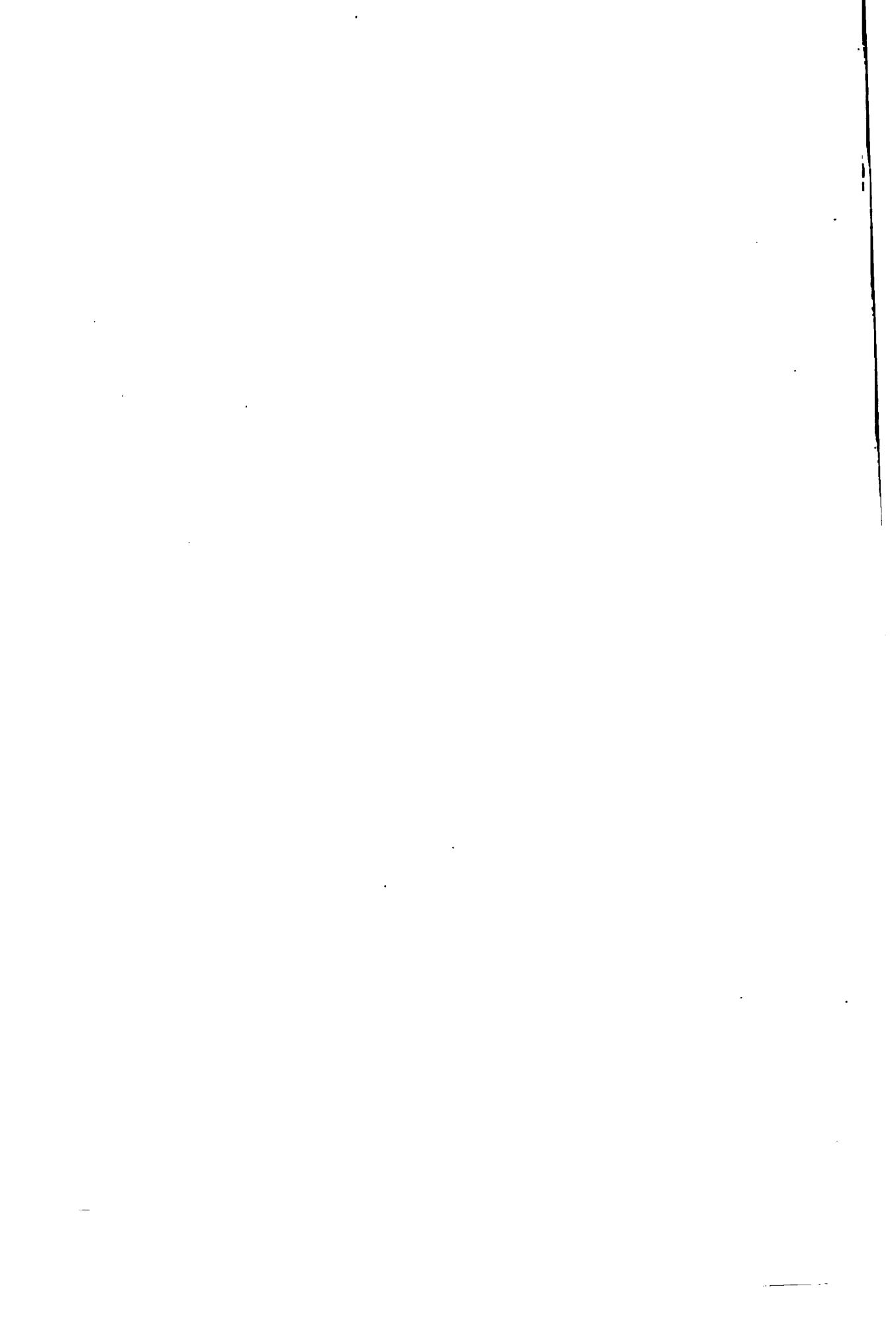
blood. A mere circle completes itself as a human eye. The upright and cross lines that seem to have stood for a tree take again a more vegetable shape. In this way we may obtain from the more advanced representations of certain objects a retrospective light on the meaning of an original linear form. At the same time a whole series of new symbols, a few of them direct borrowings from Egyptian or Hittite sources, is introduced, of which no prototypes can be found in the earlier linear series. The repertory becomes larger; more complicated, but also more expressive.

From the alphabetic point of view indeed this process must be regarded as in the main reactionary, though thoroughly characteristic of the influences predominant in dynastic Egypt. However imperfectly applied as yet to the purposes of a formal script, the old linear forms,—such as we see them both in the primitive Aegean strata and in prehistoric Egypt,—were those that ultimately triumphed in the Phoenician letters. The primitive engraver who had made an ox's head with an angle and cross strokes or a tree with an upright and three horizontal lines was nearer the beginnings of alphabetic writing than the artistically trained Egyptian whose picture-sign informs us of the genus and species.¹

ARTHUR J. EVANS.

¹ On this, as on the former occasion, I have refrained from any attempt to interpret either the linear or the pictographic script. It has seemed to me that in the present stage of the enquiry the main object should be to collect

materials and institute comparisons. To those who care to embark on more ingenious speculations Dr. Kluge's work *Die Schrift der Mykenier* may afford food for reflection, but hardly for encouragement.





PRIMITIVE CRETAN PRISM-SEALS OF STEATITE.





a



a



a



a



b



b



b



b



c



c



c



c

9

10

11

12



a



a



a



a



a



b



b



b



c



c



c



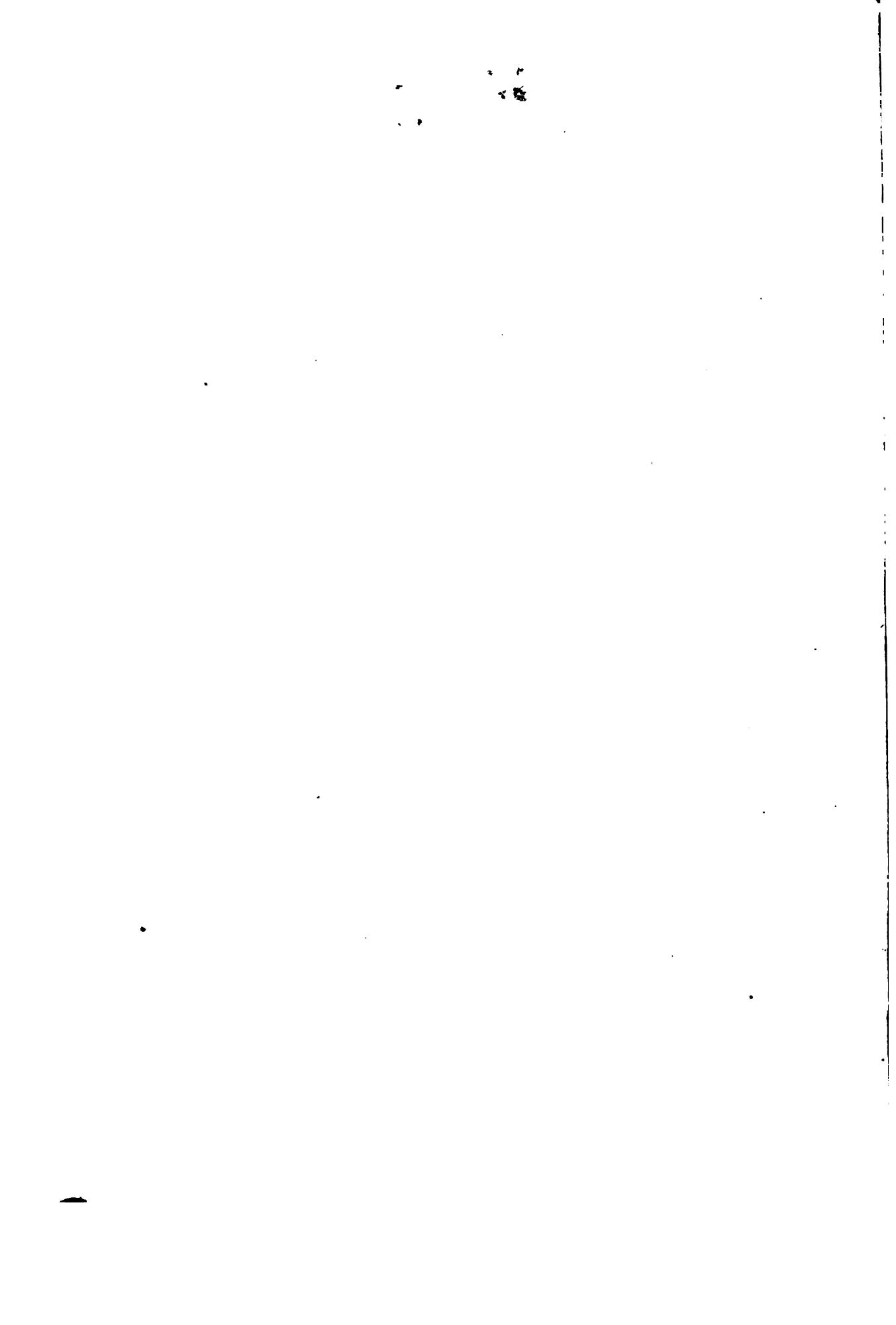
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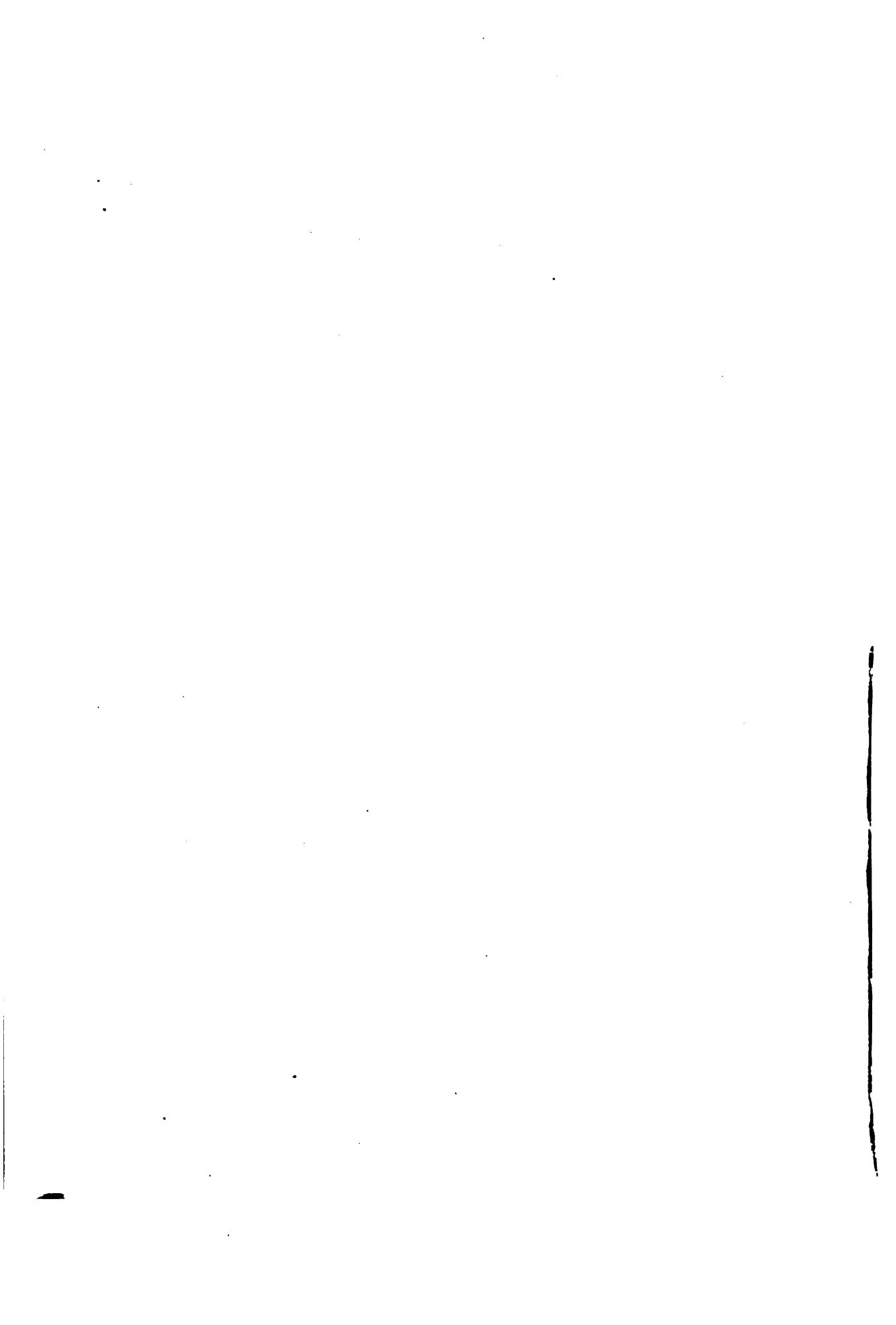
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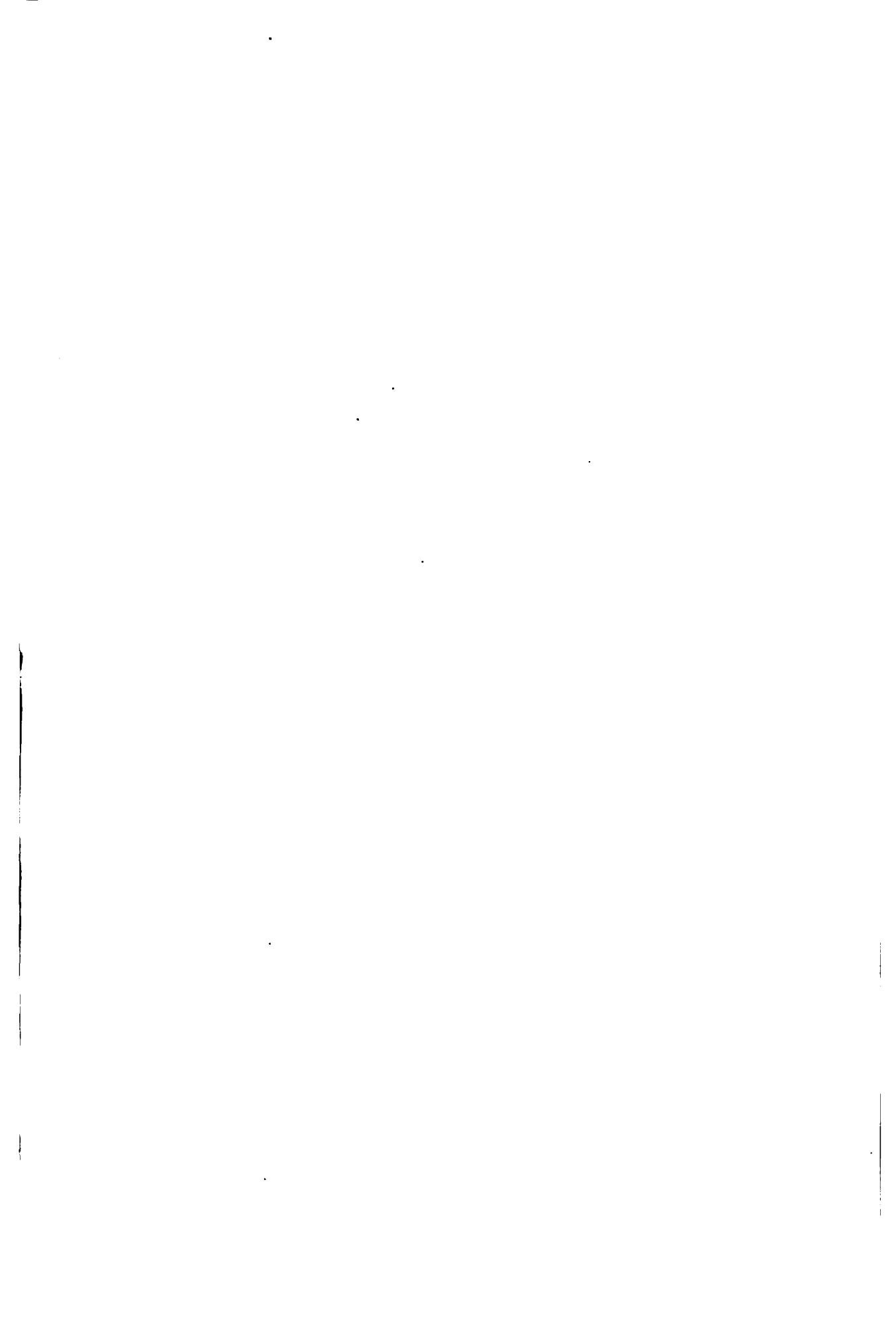
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